Cisco thinks small

Cisco's next billion-dollar hope? Small-business products and services.
PAGE 8.

Compliance meets security

At this week's Computer Security Institute Conference, vendors are expected to unveil products that make assessing risk easier. **PAGE 8.**

Honk if you're wireless

Feds, car makers pushing carriers to support wireless scheme for highways.
PAGE 12.

NETWORKWORLD

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November 14, 2005 ■ Volume 22, Number 45

New Lotus boss sailing tricky seas

BY JOHN FONTANA

IBM/Lotus chief Michael Rhodin this week will quietly finish his first 100 days at the helm, but it is the coming months that will tell if he is the one who can align Notes/Domino with IBM's Java-based collaboration strategy and validate customers' continued investment in the Lotus platform.

The first order of business will be to reveal that new versions of Notes/Domino will extend past Version 8, which could ship by the end of 2006.

Rhodin, a 21-year IBM veteran, says his skills as an innovator are his core strength, but it might be his ability as an orator that sets the tone for his leadership and wins the hearts of users looking to find their way in IBM's shifting collaboration software strategy.

Rhodin's public unveiling as leader is set for late January, when he will deliver a keynote address to thousands of Lotus faithful at the annual Lotusphere user conference. Among other things, he is armed with two numbers that he hopes will send the message that IBM has a strong hold on Notes/Domino.

See Lotus, page 80



CHRISTOPHER NAVIN

CA users to eyeball Unicenter upgrade

BY DENISE DUBIE

Computer Associates this week is set to share management and security product plans with customers eager to hear which products the vendor will develop and which it may leave behind.

The company is expected to announce Unicenter 11, the first major revision of the network and systems management software in four years, at its CA World customer conference in Las Vegas. While CA would not disclose details, upgrades are expected to include the ability to manage virtualized servers, automate problem resolution and collect configuration data that could be used to populate the company's first configuration management database (CMDB).

And for security, CA is expected to announce upgraded eTrust identity and access management tools, which are expected to incorporate technology acquired with Netegrity last year.

"It is clear that CA has not been in the news [for its products] in

See Computer Associates, page 78

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Telling tales of the tape

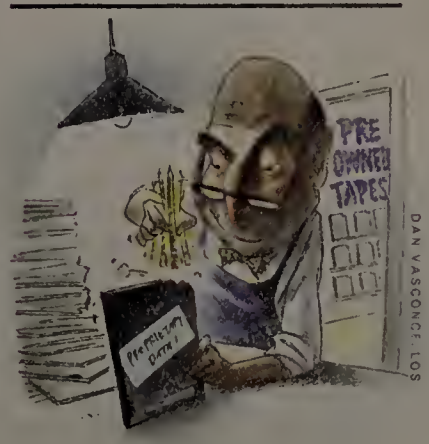
BY DENI CONNOR

WiderNet

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See Tape, page 16



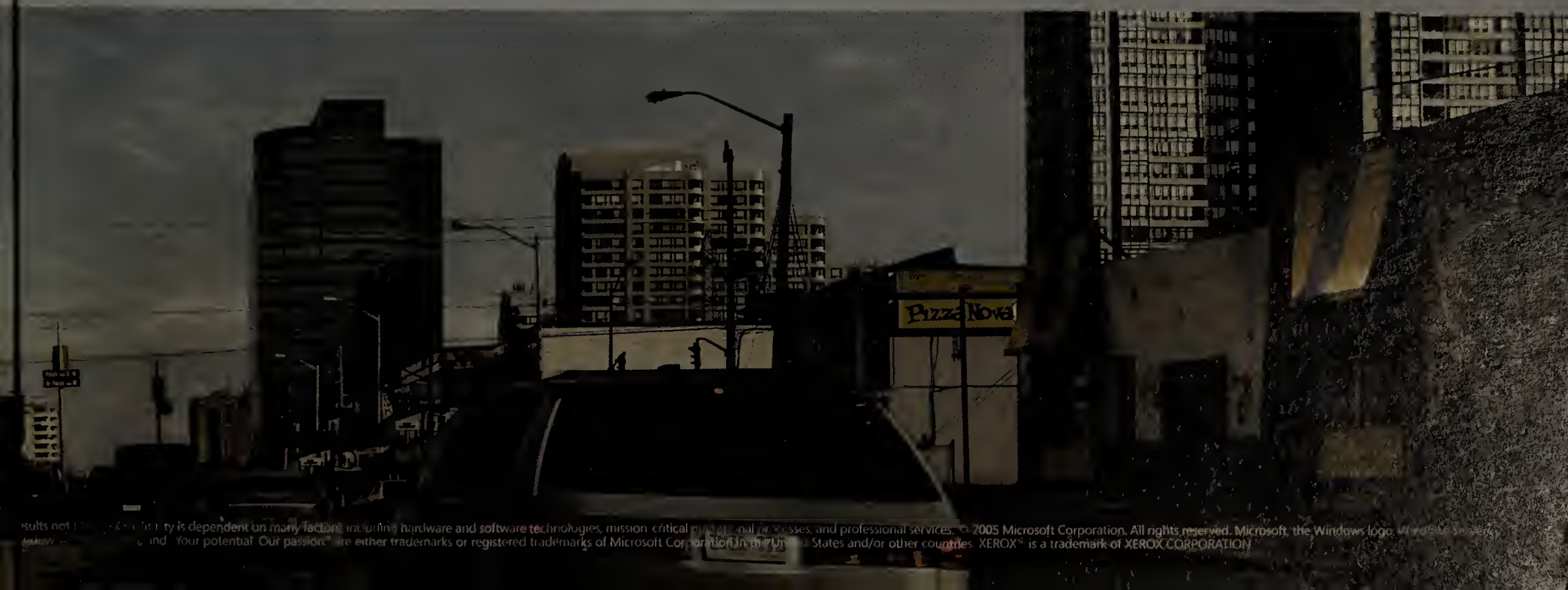
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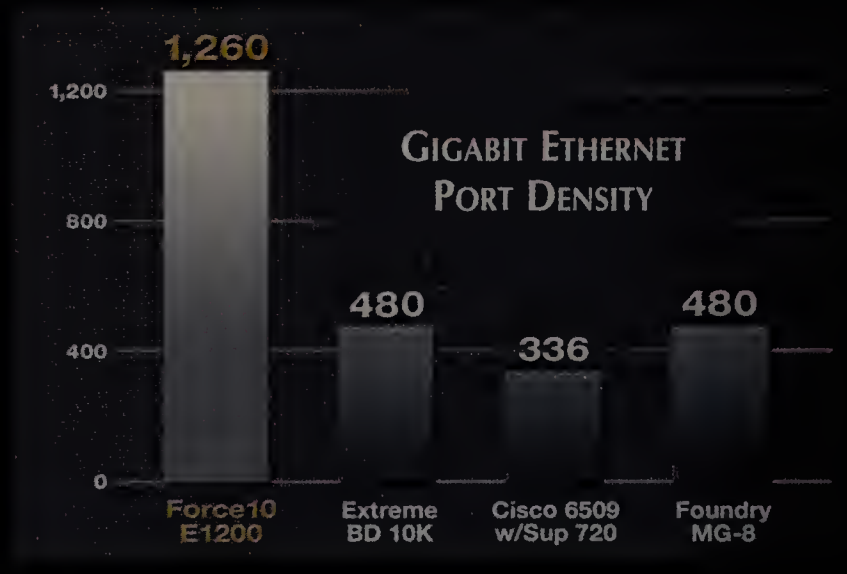


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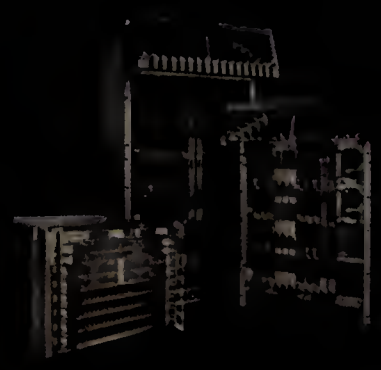
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NETWORKWORLD

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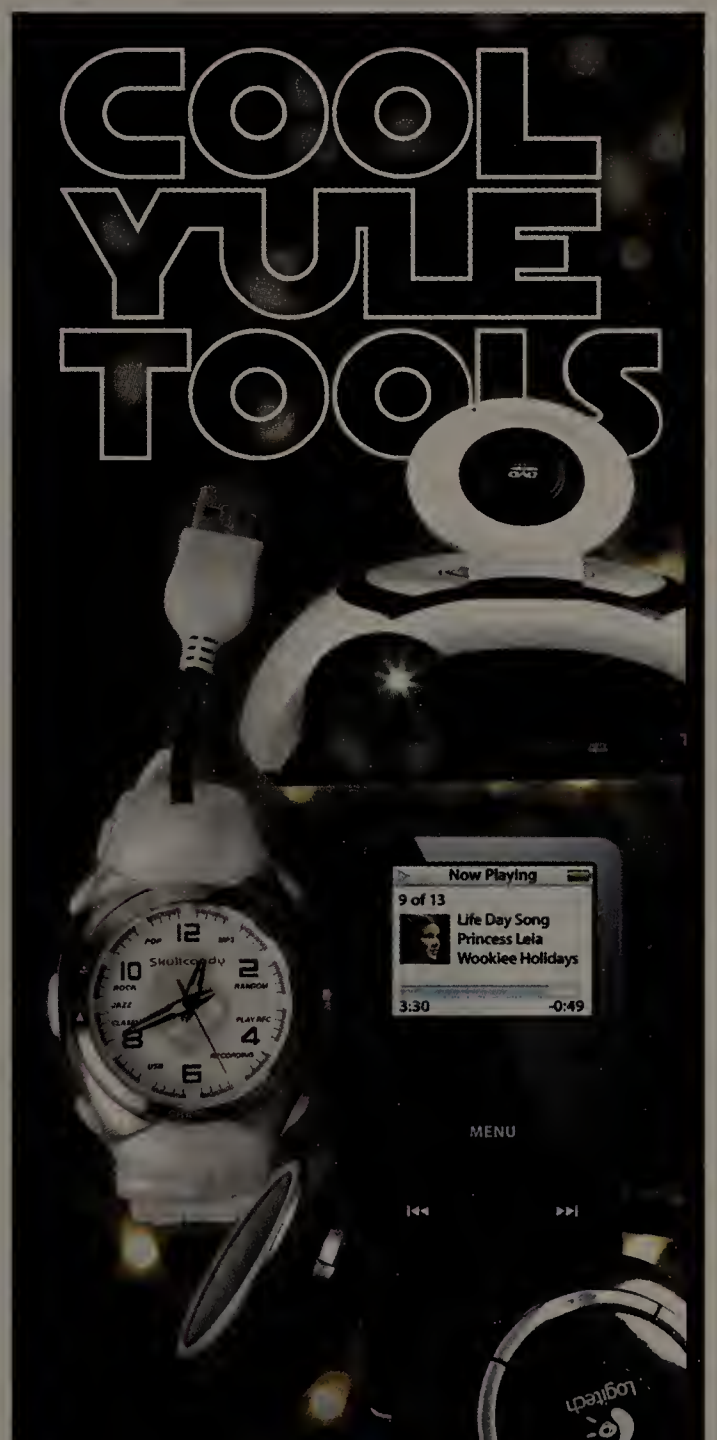
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COOLTOOLS

Logitech's Z-5450 Digital 5.1 Speaker System hits a high note with 116 watts of power. Page 38.





Our testing elves have been working overtime, getting ready to bring you the wish list of our favorite technology products for the gift-giving season. Experience the joy of the Cool Yule Tools holiday gift guide. Page 62.

CHRISTOPHER NAVIN

■ **CONTACT US** Network World, 118 Turnpike Road, Southborough, MA 01772; **Phone:** (508) 460-3333; **Fax:** (508) 490-6438; **E-mail:** nwnews@nww.com; **STAFF:** See the masthead on page 16 for more contact information. **REPRINTS:** (717) 399-1900

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In our Network World ITVideo, we put Tom Burkardt, CEO and president of BlueNote Networks, in the *Network World* Hot Seat, to watch him explain why BlueNote claims to be the Skype of enterprise VoIP.
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Cool Tools
In this video, Keith Shaw, senior editor of product testing, rates the latest gizmos so you don't have to. This week Shaw looks at the Sony Vaio T350P laptop, equipped to support Cingular's Edge wireless broadband network.
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NetworkWorld.com at 10
Join us as we look back at the events of the past 10 years in networking and tell us where the network is headed.
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Keith Shaw reports on what's so great about Iomega's new NAS boxes, details of LG/Cingular's new MP3 cell phone and how Sony promises no more wobbly digital images.
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Compendium
Executive Online Editor Adam Gaffin points you to copies of messages on the future of Microsoft from Bill Gates and Ray Ozzie. Is this comparable to the ship-turning when Gates suddenly got the Internet?
DocFinder: 9741

Gibbsblog
Columnist Mark Gibbs on Sony's controversial DRM software: "Is a class-action suit too kind for Sony executives?" **DocFinder: 9740**

Small Business Tech
Microsoft vs. the world: Columnist James Gaskin details affordable open source alternatives to Windows. **DocFinder: 9742**

Seminars and events

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NEWSbits

Vendors unite to keep Linux patents open

■ Five of the biggest names in technology have funded a new venture called the Open Invention Network that will acquire patents and offer them royalty free to promote the Linux open source operating system. The Open Invention Network was formed with undisclosed investments from IBM, Novell, Koninklijke Philips Electronics, Sony and Red Hat, and will be headed by Jerry Rosenthal, who was most recently vice president of IBM's Intellectual Property and Licensing business. When the Open Invention Network acquires patents they will be available to any company, institution or individual that agrees not to assert its patents against the Linux operating system or certain Linux-related applications, the group said in a statement. Among its initial patent holdings will be a set of business-to-business e-commerce patents purchased from Commerce One by a Novell subsidiary.

Google has plans for mapping

■ Google's enterprise unit was recently entrusted with the business versions of the Google Earth mapping products, and executives are discussing ways to integrate them with the company's enterprise search products. "There's definitely a lot of potential for integration between the Google Earth products and the Search Appliance and the Google Mini. We're starting to look at what might make sense," says Dave Girouard, general manager of the Google enterprise unit. Google acquired what are now known as the Google Earth products last year when it bought Keyhole. The most basic product, known as Google Earth, is a free downloadable mapping application with a multiterabyte database of satellite images and a video game-type user interface that lets users "fly" around the globe, zipping from destination to destination, zooming in and out of cities. Google's enterprise unit is at a preliminary stage of discussions over ways to integrate Google Earth Pro and Google Earth Enterprise with its enterprise search wares.

Yahoo says 'no, thanks' to AOL

■ Yahoo scuttled talks to take an interest in AOL after learning the proposed terms of the deal, a company spokeswoman said last week. The rejection narrows the field of suitors for AOL. Microsoft and Google have reportedly expressed an interest in the Time Warner unit, but no definitive deal has been struck. Yahoo's rejection of a deal came two days after the company's CEO, Terry Semel, and Time Warner CEO Richard Parsons met in New York. Rumors have circulated that Comcast may be interested in a piece of AOL. While AOL has had a declining number of subscribers over the last two years, it still had 20.1 million fee-paying subscribers in the United States as of Sept. 30. It has dropped fees for much of its content and tried to take in more advertising revenue. Google has an agreement to provide search technology to AOL, while AOL in turn runs ads from Google's advertising network.

{quote of the week}

"Today the opportunity is to utilize the Internet to make software far more powerful by incorporating a services model. We will build our strategies around Internet services."

Microsoft Chief Software Architect Bill Gates in a recent e-mail to company executives.

TheGoodTheBadTheUgly


PETER HOEY

Doing it for the kids. Wireless carriers are joining forces to develop tools to help keep racy, violent and gambling-related content out of the hands of children as Internet and video access becomes more common. The CTIA trade association last week unveiled its Wireless Content Guidelines. With the rules being voluntary, it remains to be seen how widespread adoption proves to be.

< Incredible shrinking IT groups. The demand for IT specialists is decreasing and the size of IT departments is shrinking significantly, according to new research presented by Gartner last week at the Gartner ITxpo conference in Cannes, France. By 2010, IT organizations in midsize and large companies will be 30% smaller than they were this year, Gartner predicts.

VoIP tension. The FCC has backed off its earlier requirement that Internet telephony providers must cut off existing customers if they do not have Enhanced 911 emergency dialing service, but this battle remains far from resolved. That's because the FCC also ruled that VoIP providers should stop marketing to new customers if they cannot provide E911 service, a stipulation that provoked new howls of outrage from the VoIP guys.

Oracle's Maffei lands CEO job

■ Oracle's CFO Greg Maffei will soon take on the CEO job at investment company Liberty Media. The appointment removes some of the mystery around Maffei's hurried departure from Oracle after four months. Oracle announced Maffei's resignation after Wall Street analysts began publicly questioning his absence at industry events. Oracle said at the time that Maffei was departing for a "terrific professional opportunity." Maffei, who in June became Oracle's third co-president, reportedly left after personality conflicts with other top executives and the realization that he would not soon succeed Larry Ellison as Oracle's CEO. Maffei, a longtime Microsoft executive, spent five years as CEO of 360networks before joining Oracle.

SuSE Linux founder leaves Novell

■ Hubert Mantel, a founder of the SuSE Linux project, has resigned from Novell, which acquired SuSE in January 2004. Mantel was one of four founders of SuSE, a consulting group that focused on creating a packaged version of Linux. He was a longtime maintainer of the SuSE project, but Novell notes that dozens of other developers work on SuSE. Mantel didn't immediately respond to an e-mail seeking comment. Earlier this month, Novell announced restructuring moves, including a 600-worker layoff and a plan to focus its efforts on high-growth markets such as Linux.



"Geez, when my boss talked about 'simplifying the transport layer', I had no idea this is what he meant!"

Rick Stoffiere of Avon, Ohio, is this week's winner. Check back every Monday for the start of a new contest. www.networkworld.com/weblogs/layer8



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Cisco service targets small business

Teaming with MCI to deliver hosted voice and data.

BY PHIL HOCHMUTH

Looking to small businesses as its next billion-dollar-a-year opportunity, Cisco this week plans to launch hosted voice/data services based on Linksys gear and delivered via carriers.

With its Hosted Small Business Services (SBS), Cisco is teaming first with MCI to offer hosted services based on small-office network gear — mixed Cisco/Linksys technology branded as Linksys One. The offerings, including hosted VoIP, messaging, access and firewall services, will be designed for companies with fewer than 100 end users and cost about $1,000 per month. The services will be sold and supported by local resellers.

Cisco says its Hosted SBS approach will give small companies enterprise-class network and IT capabilities. But resellers and carriers — which often compete for these same small-business customers — will have to buy into the program and cooperate for it to work, analysts and observers say.

One of "the last places on earth where the LAN fundamentally needs a complete upgrade is in small businesses," says Steve Kamman, senior networking and data infrastructure analyst with CIBC World markets. Hubs and sneakernets are still common network technologies in small companies, especially outside the U.S., he adds.

The company with fewer than 100 employees has always been a tough nut to crack for enterprise equipment providers, because these companies often use consumer-oriented network gear. Also, the cost of having to contact so many disparate companies can squeeze profits.

But IT spending by such companies is hard for vendors to ignore. Businesses with fewer than 100 employees will spend more than $12 billion on network and telecom equipment this year, according to research firm AMI Partners. Worldwide, small businesses are expected to account for 24% of all IT hardware and software spending next year Gartner says.

Cisco plans to announce Hosted SBS as an "Advanced Technology" — joining the ranks of its IP telephony, security, optical, storage network, wireless and consumer business lines. Each is generating $1 billion in annual revenue, or that is Cisco's expectation. Cisco's Advanced Technologies contribute about 21% of its product sales, while switches and routers make up most of the rest. But revenue from the newer products is growing at 25%, compared with 3% growth in switches and 13% in routers.

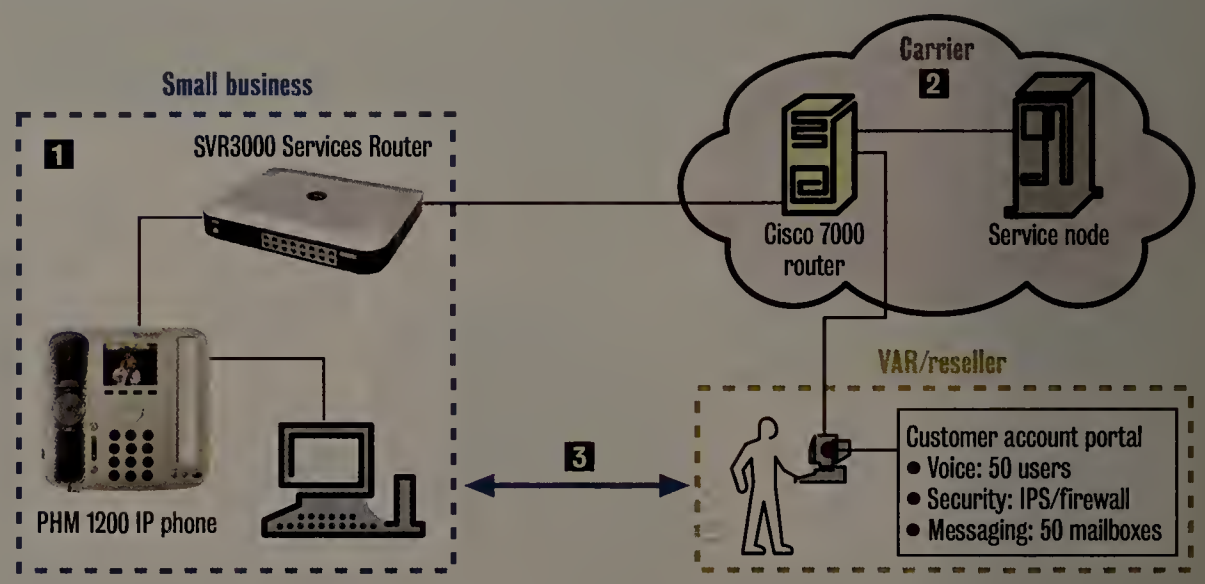
Cisco's past efforts to get a big piece of the small-business market did not work. "Dumbing down" its enterprise products came up short, because customers were finding better value from commodity products, says Marthin De Beer, vice president and general manager of Linksys' small-business group. "We weren't giving [small businesses] what they wanted."

Carriers have also failed at penetrating small business with hosted VoIP and security services, because the offerings have been

See Cisco, page 9

Bundled small-business services

Cisco is combining its Linksys and other technologies with services from carriers and VARs to deliver converged applications and connectivity to companies with five to 100 workers.



1 Offices lease equipment and services from VARs/resellers for a monthly fee — around $1,000 — which could include bundled VoIP, broadband, managed firewall and hosted e-mail/voice mail services.

2 Carriers, such as MCI, host the applications via a Cisco service node, which includes hardware and software for provisioning services and edge router infrastructure for delivering broadband.

3 Local VARs or resellers are the point of contact for support and service. VARs access customer accounts via portals hosted on the carrier service node.

Conference to put spotlight on compliance

BY CARA GARRETSON

As compliance responsibilities fall more in the laps of security professionals, vendors are responding with products and services designed to make understanding and reporting on risk and compliance more accessible.

At the Computer Security Institute (CSI) Conference in Washington, D.C., this week, a number of vendors, including NetIQ, Consul and ConfigureSoft, will unveil new or updated offerings aimed at making it easier for companies to assess risk and gauge their compliance with federal and industry regulations. The conference, in its 32nd year, is expecting 3,000 attendees. It also features for the first time a compliance track with nine presentations covering topics such as compliance management, consumer breach notification statutes and privacy.

But why is compliance of such interest to security professionals? "It's not, but we're seeing more and more security managers made responsible for compliance," says Khalid Kark, a senior analyst with Forrester Research. "That's why it's a big deal for those people to know what's going on in the industry, what the regulations are and how to comply."

This trend toward making security professionals responsible for compliance began a few years ago but has picked up significantly over the past year, because of "a lack of companies being able to find someone else," Kark adds. "Since security [professionals] already have related responsibilities, to be fair it probably makes sense; you don't want to have several different efforts in trying to do the same kinds of things."

At the conference, NetIQ plans to announce its Risk and Compliance Center. This software centralizes and analyzes data from NetIQ's security products regarding configurations, policy compliance and vulnerability to create a management console for quickly gauging compliance of a company's IT controls, says Chris Pick, the company's vice president of corporate strategy. The console works as an "executive dashboard" to extract technical data regarding compliance and risk management and display it clearly, he says.

NetIQ Risk and Compliance Center is priced starting at $40,000 and slated for availability before year-end.

Also at the CSI Conference, Consul Risk Management plans to announce Version 6.0 of its Insight suite of security auditing and compliance tools. New features include an option to automatically generate security policies, new end-user filtering abilities and improvements to the suite's management module, company officials say.

Consul is addressing the intersection of compliance and security by tracking and reporting on malicious and unintended security policy violations, so that a compliance record can be established. The company calls its approach the W7 methodology, determining who, what, when, where, where from, where to, and on what to monitor and analyze activity. The upgrade is priced at $40,000.

Another company, Configuresoft, is focusing on the compliance of IT systems for companies that handle credit card data. The company's Enterprise Configuration Manager/PCI DSS Continuous Compliance toolkit aims to help vendors and merchants covered by the Payment Card Industry Data Security Standard (PCI DSS) that governs the security of credit card data.

The toolkit, slated for release this week, is free to customers under Configuresoft's customer support program.■

Cisco

continued from page 8

complex to install at customer sites, while pricing has not been competitive with traditional hosted Centrex or managed telephone key system offerings from telecom resellers, says Nigel Williams, vice president of Linksys' channel and service provider business.

These issues are solved by the lower-cost Linksys gear, which can be set up in less than one hour and configured remotely, Williams says.

Cisco/Linksys inside

The central piece of customer premises equipment under Hosted SBS is the SVR Services Router. The box includes a non-IOS WAN router operating system, T-1 and broadband connectivity ports, and a 16-port 10/100M bit/sec power-over-Ethernet switch.

A Session Initiation Protocol (SIP) proxy server, firewall and local DNS and DHCP servers also run on the platform. The SVR Services Router runs a modified Linux operating system and can serve as a local platform for e-mail and other applications.

For VoIP, the Linksys One PHM 1200 is an IP phone that ties back to a centralized SIP-based call server in the carrier cloud. For internal calls, the phone uses SIP-based point-to-point signaling, instead of tying back to the carrier network and using WAN bandwidth. Individual voice mail boxes are stored locally, so they are still available if the WAN link goes down.

Another VoIP survivability option is the VGA2000, a gateway that connects analog devices and fax machines and provides local calling in case the IP phones cannot reach carrier SIP servers.

Cisco says these devices are the first co-developed products among its Linksys and Cisco development teams.

"We're getting the full ball of wax in one box, instead of having to buy and install," a router, firewall, phone system and LAN switches separately, says Bob Crenshaw, president of Exceleron Software, a Dallas company with 35 employees. Crenshaw says Exceleron had the Linksys One router and phones delivered by a local reseller, then set up and configured remotely. "We didn't have to have a technician here all day; we plugged them in, and it all worked."

He says the service/equipment bundle will allow him to relieve one of his employees from the double duty of writing software and supporting the company's small network and telephone key system.

"I can put that person on another job, something that will help make us money," he adds.

Channel challenges

The Linksys One model relies first on carriers such as MCI to tap local resellers to sell the equipment/services packages to small companies.

"We are going to have to go out and find the right [value-added resellers]" to make the business work, says Phil Meeks, senior vice president of strategic alliances at MCI. In the future, Meeks says additional services, such as hosted ERP and CRM applications or office productivity software, could be provisioned to small companies.

But the interdependent model of Cisco's Hosted SBS strategy could take time to develop, with obstacles among the various carrier, vendor and channel partners.

"The issue is what channel they're going to market on, and if those channels compete with each other," says Frank Dzubeck, president of Communication Network Architects.

"The big bitch against Cisco by the VAR channels is the fact that they have, in the past, given better pricing to the RBOCs, who then undercut the VARs," he says. "The RBOC is the first and primary channel to small business in lots of cases."

The biggest hurdle will be getting local resellers of Cisco and Linksys gear to come into the fold with carriers such as MCI, soon to be part of RBOC Verizon.

Hosted application services "is an area where some telcos continue to maintain dreams of getting into someday, their utter failure to execute notwithstanding," CIBC's Kamman says. "It will be interesting to see if they are willing to do this on a co-branded basis." ■

nww.com

More Cisco analysis online

Read our expanded interviews with CIBC's Steve Kamman and industry watcher Frank Dzubeck.

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Start-ups look to horn in on net control

LAN security appliances enforce policies at access switches.

BY TIM GREENE

Businesses that seek more control over who and what machines access their LANs but don't want to wait for network equipment vendors to get their plans in place have another option: appliances that impose such controls without requiring switch upgrades.

This week a start-up called Nevis is scheduled to announce its alternative, two network devices that enforce policies by allowing access to authorized resources, denying it to unauthorized resources or shuttling a non-compliant machine to a quarantined network.

This is similar to the approach taken by competitors ConSentry Networks and Vernier Networks. All three vendors' appliances sit between LAN access switches and LAN distribution switches to exert control over individual access switches, so if a desktop starts misbehaving, it can be isolated without affecting an entire LAN segment. Nevis' LANenforcer gear can serve as the access switch and provide per-port control of security policies.

Equipment from Nevis and Vernier also checks that computers meet network security profiles, such as having appropriate patches and virus protection in place.

Cisco's Network Admission Control (NAC), Microsoft's Network Access Protection (NAP) and Juniper's Enterprise Infranet initiatives have similar goals but require software agents on every desktop and upgraded switches that can act as enforcement points for security policies.

Joel Snyder, a senior partner at Opus One, a consulting firm in Tucson, Ariz., and a member of the Network World Test Alliance, describes the new appliances as "high-density, high-performance, identity-based firewalls." The smaller vendors may have an advantage, he says.

"I see this as a technology that will do many of the things that NAC wants to do, and in fact might be better than NAC/NAP . . . at pushing the brains into the network rather than expecting them to be at the edge, where the PC is," Snyder says.

The main downside of NAP and NAC is that they require upgrades and overhauls across a range of equipment, says Lloyd Hession, CSO for financial networking service provider BT Radianz, which uses ConSentry gear. "We're a huge Cisco shop, and the challenge Cisco NAC has is it typically requires a lot of upgrades. Unless you're building from scratch or have a huge amount of money for your project, it's going to take a very long time," he says.

The other issue is that Cisco and Microsoft alternatives are not ready. "When everything shakes out with the Cisco and Microsoft solutions, it will be 24 months down the pike," according to the infrastructure architect for one of the top five commercial insurance companies in the United State, who is testing Nevis gear. In the case of Microsoft, waiting for the client software and testing it before deploying could take another 12 months, he says.

But many businesses are looking for better, simpler LAN access control. For example, consultancy Financial Engines of Palo Alto, places a firewall between its corporate network and its production network — the network where customer financial information resides and where financial advice is generated.

Today, to grant access to a production network requires an Active Directory profile change, as well as a separate firewall rule change, says Matthew Todd, chief information security officer for Financial Engines. With Nevis, that could be accomplished by applying a single Active Directory rule change that shifts the user to a different firewall policy group. The Nevis gear would then enforce the new policies.

"We'd be able to allow some administrators that are able to administer groups but not firewalls to allow an employee access to customer data without having to open up a ticket with the firewall group and have to wait for that," he says.

Accomplishing all the scanning required by these devices requires enormous processing power, says Phil Schacter, analyst with Burton Group. To that end, ConSentry and Nevis have developed high-performance chips so their devices don't slow down LAN traffic.

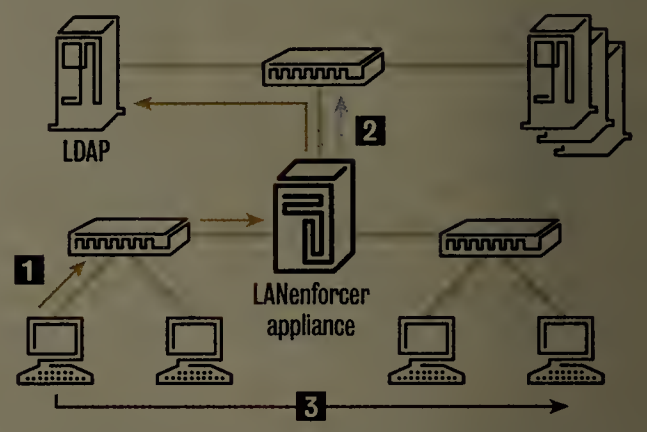
Processing power also is a limitation of switch-vendor setups, and to remedy that, ConSentry has long-range plans to put its appliance on a blade that could be inserted in a switch, the company says.

Nevis is shipping two types of LANenforcer appliances. Nevis 1000 is an access switch that checks and enforces access policies, and it includes a port-based stateful inspection firewall. Desktops plug directly into it. The Nevis 2000 is a similar device that connects to groups of switches rather than to individual PCs, similar to what ConSentry's appliances do.

There are three N 1000 models priced from $13,000 to $20,000. The N 2024 costs $35,000. ■

Standing guard

Nevis Networks' LANenforcer appliance applies access policies to desktops on LANs and looks for security violations to shut down.



1. When a user logs on, LANenforcer checks with LDAP or other directories for security policies for that user.
2. LANenforcer allows connections only in accordance with policies that define which network resources a user is authorized to reach.
3. If a user attempts to reach other resources or systems, or if a worm on a PC attempts to do so, LANenforcer can shut down that machine's network access without affecting other devices.

Sun has a lot riding on UltraSPARC T1 chip

BY JENNIFER MEARS

Sun says servers built on its long-awaited Niagara processor, a multicore, multithreaded chip designed to better handle the simultaneous requests that come with Web-based applications, such as security processing, should ship by year-end.

The servers, which will consume about half the power of Xeon- or Opteron-based systems, may be what Sun needs to jump-start its scalable-processor architecture business, analysts say. On Monday the company is expected to introduce the UltraSPARC T1, a chip Sun executives say can handle multiple tasks and increase throughput without the power demands and heat output of today's processors. The UltraSPARC T1 has eight cores on a single piece of silicon. Each core can simultaneously handle four individual threads — software instructions that must be processed — letting the chip carry out more tasks and make more efficient use of memory at a lower clock speed.



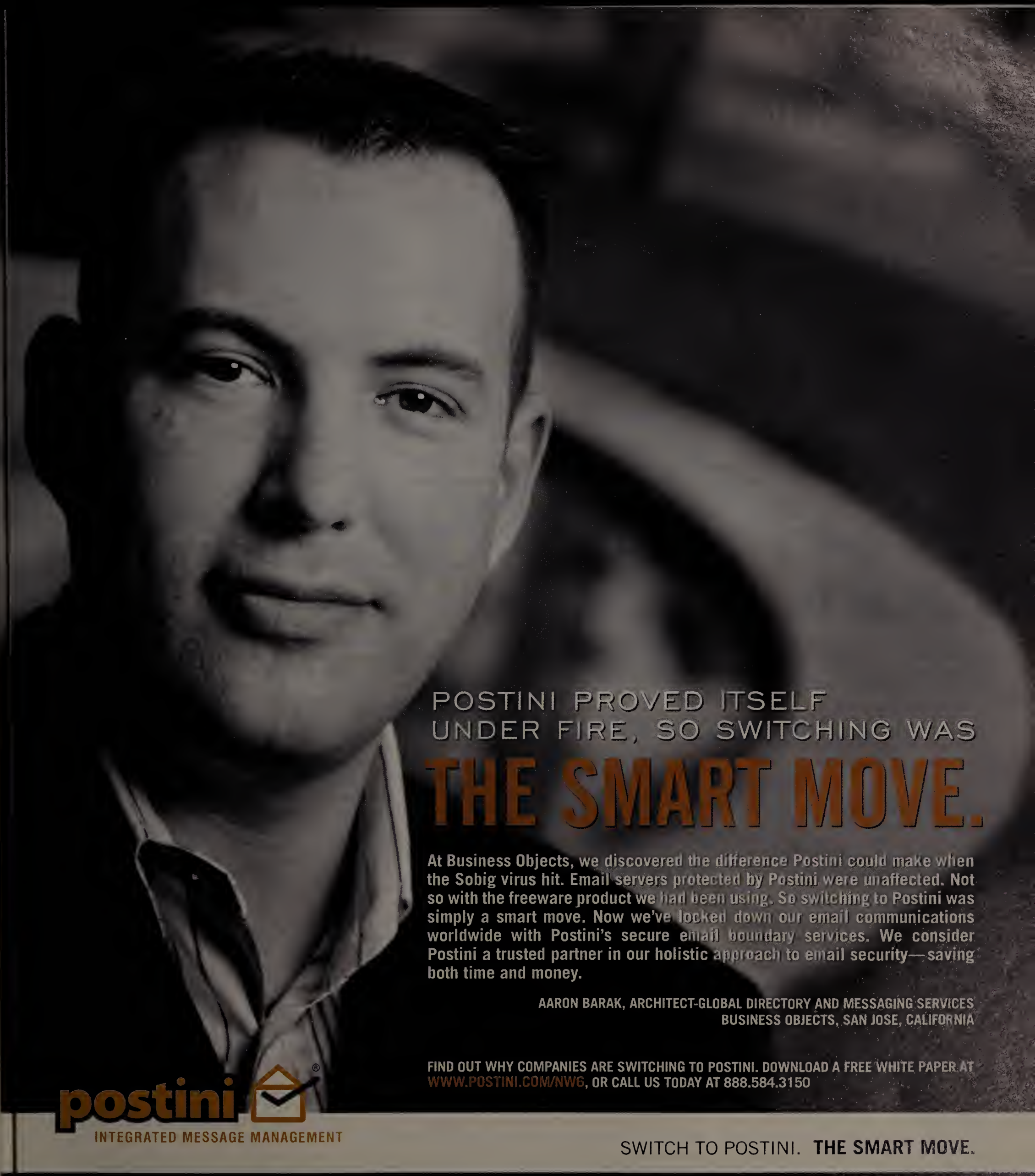
Sun's new UltraSPARC T1 has eight cores that can handle four software threads apiece, enabling 32 threads to be handled simultaneously on a single piece of silicon.

The processor, which will run as fast as 1.2 GHz, will consume about 70 watts of power, a tad more than an average household light bulb and less than the 100 watts or more that most processors consume today, Sun executives say.

Sun isn't releasing pricing, but analysts say the servers are expected to be priced similarly to well-configured Xeon- or Opteron-based systems — about $5,000. The move comes at a good time for the server maker, which has been struggling to regain its footing since the dot-com bust forced cost-conscious buyers to move away from pricey SPARC-based servers to lower-cost standards-based systems.

"I continue to view this as probably the most important development in terms of what Sun has done with SPARC since the introduction of the original SPARC back in 1987," says Nathan Brookwood, principal analyst at Insight 64. "The fact that this chip is coming along at a time when many IT managers are pulling out their hair trying to figure out how they're going to increase their workload capacity without increasing their power or floorspace requirements in their data centers is very good news [for Sun]."

See Niagara, page 78


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U.S. pitches wireless highway safety plan

BY JIM DUFFY

The U.S. Department of Transportation and automakers are attempting to garner participation from the telecom industry in an ambitious project to enable nationwide wireless communication between cars and roadside facilities with the goal of heading off accidents and alleviating traffic congestion.

The Department of Transportation and officials from DaimlerChrysler and Nissan recently pitched the Vehicle Infrastructure Integration (VII) project to carriers and service providers attending the Telecom '05 conference in Las Vegas. VII is a $3 billion to $10 billion federally funded effort to build a 220,000-hot-spot network — supporting IEEE 802.11a and 802.11p — along interstate and state highway systems.

"We're not in the telecommunications business, so we need help," says Bill Jones, technical director of the Intelligent Transportation Systems (ITS) in the Department of Transportation. "This is our first foray to really try and open up the dialogue between our two industries."

"We need [the telecom industry] to be a part of this," adds Chris Wilson, vice president of ITS strategy and programs at DaimlerChrysler.

VII is a 984-foot dedicated short-range communications (DSRC) network using 75 MHz of spectrum in the 5.85- to 5.925-GHz band. Auto manufacturers would install DSRC and GPS antennas, receivers and transceivers in all new vehicles, while the Department of Transportation would install the communications links on the roadside.

Cars could then communicate with each other over short distances to warn of impending congestion, or an accident to avoid, or for state and federal highway administration personnel to share road advisory information with vehicles. The system is intended to reduce the expenses associated with accidents that involve injuries or fatalities, which costs the country $260 billion per year; and with congestion, which costs $100 billion per year, VII officials say.

The DSRC system is not designed for casual conversation, these officials stressed.

"We're not designing this to support non-transportation needs," Wilson says. "It's not subject to the whims of consumers."

Drivers will still use cell phones, WiMAX and Wi-Fi in addition to DSRC, Wilson says. "We will never see a car that only has DSRC," he says.

Crash course

There were 42,643 vehicular fatalities in 2003, 3 million injuries and 6.3 million accidents, which cost the U.S. economy

$260 billion.

SOURCE: DAIMLERCHRYSLER

That's one of the hooks that VII proponents hope will attract the participation of carriers and service providers. The automotive industry could provide access to tens of millions of people who buy new cars every year and to the 230 million cars already on the road. Once one VII radio antenna is installed in their cars, and it works, they may be inclined to purchase others.

"The first radio reduces threshold for getting a second radio in," Wilson says.

There are also opportunities for carriers to provide backhaul services for the DSRC system, as well as in assisting the Department of Transportation with service in sparsely populated rural areas or densely populated metropolitan areas, and in providing long-term maintenance and operations for the nationwide network.

"This is another infrastructure," the Department of Transportation's Jones says. "That is not the bag of the public sector."

The Department of Transportation also could provide carriers with access to rights-of-way or collocation facilities along every U.S. roadway, and to 75 MHz of licensed spectrum, Jones says.

The U.S. Telecom Association, which represents carriers, says it is "helping the Transportation Department's outreach effort to alert and educate service providers about the new opportunities available."

The Telecommunications Industry Association, which represents equipment suppliers, says it is generally supportive — philosophically and financially — of intelligent transportation initiatives such as VII.

The operational concept of VII would have vehicles communicating with intersections and with each other via sensors, probes and aggregators to prevent crashes. A vehicle would be transmitting anonymous onboard sensor data to a roadside unit (RSU) every time it passes one. The anonymous data received at an RSU would be sent to an aggregation point from which it would then be forwarded to authorized subscribers. Each aggregation point could receive data from several thousand RSUs. All data would be organized and ordered by the geographic coordinates from the vehicles and would be available to authorized subscribers.

Other uses for the DSRC system include delivery of auto maintenance information between driver and manufacturer. Drivers could receive maintenance update and reminder information from manufacturers, or the car itself could notify manufacturers when a part was wearing out. This could reduce the costs manufacturers incur for programming diagnostics into cars and for managing customer relationships, Wilson says.

The DSRC system would not be without limitations. Because it would be a short-range system, connectivity would be intermittent, VII officials say.

"This is not an anytime, anywhere system," says Ronald Heft, senior principal engineer for Nissan North America.

That's where overlap with existing GPS systems, such as GM's OnStar, might end. OnStar is a satellite- and cellular-based system that links drivers to an OnStar service center, where advisers offer drivers real-time, personalized travel assistance and crash notification information.

OnStar is not designed for short-range vehicle-to-vehicle communications nor real-time safety applications, Wilson says, such as cooperative collision avoidance.

"I need to know what's going on 200 meters around me," Wilson says. "OnStar is not suited for that goal."

GM, the creator of OnStar, is also involved with the VII project.

Vendors are designing equipment for VII, and core safety applications are being tested. Those involved in the VII initiative expect an end-to-end reference system to be completed next summer, and for field tests to be conducted in 2007. ■

Start-up tackles SOA mgmt.

BY ANN BEDNARZ

Start-up TrueBaseline this week is expected to debut its first product, which is aimed at helping companies keep IT resources and business processes in shape to comply with myriad regulatory, competitive and operational requirements.

SOAComply lets users plan, monitor and control distributed environments that follow the principles of a service-oriented architecture (SOA). Users can model different "operating states" that establish configuration, status and behavior rules to which application, system and network resources must adhere. For example, a company could define an operating state for achieving compliance with the Sarbanes-Oxley Act, or an operating state required to handle peak sales periods. SOAComply would then alert users if anything is amiss, from the state of the applications to the bandwidth required to complete a task, says Stan Kramer, CEO of TrueBaseline.

The software originated in the nuclear power industry. Westinghouse Electric Co. developed it internally to comply with rules set out by the Nuclear Regulatory Commission that require rigid adherence to system configuration parameters. Later Westinghouse began selling its StatePointPlus software to other companies, and early this year sold the technology and assets to TrueBaseline's founders.

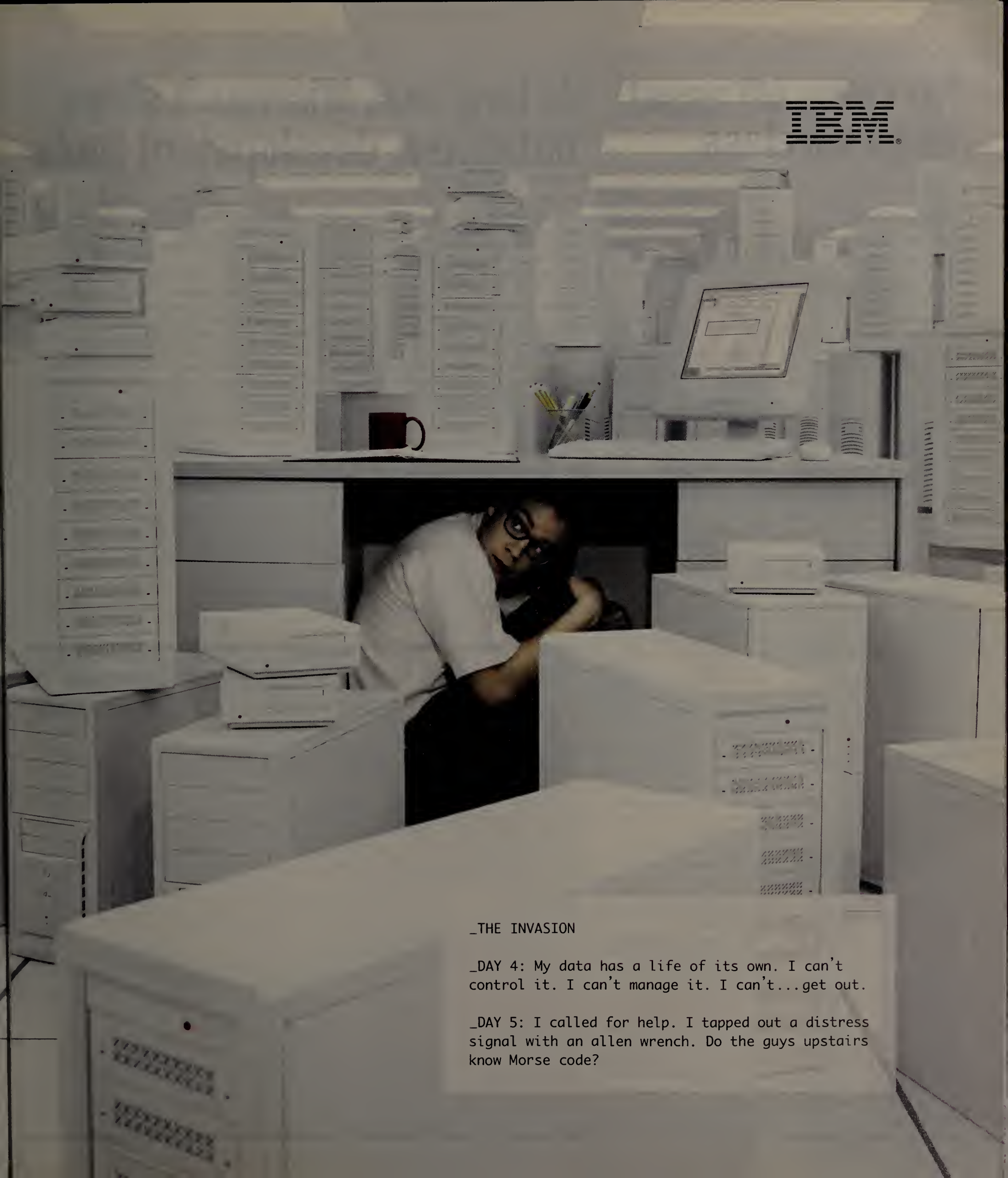
The technology differs from traditional IT change and configuration management products in its SOA orientation, says Thomas Nolle, president and CEO of consultancy CIMI. "SOA multiplies the number of systems that you have to look at, and the number of application pieces, so much that the process isn't scalable," Nolle says. Key to TrueBaseline's technology is that it models not only resources but also relationships between resources, he says.

TrueBaseline plans to partner extensively, and one of its first is NetScout Systems, which makes network and application performance management software. SOAComply can correlate network status and activity data collected by NetScout with its other resources to determine if all of the resources associated with an application or business process are in place, Kramer says.

General availability is slated for the second quarter. Pricing starts at $25,000 for the base technology. ■

Profile: TrueBaseline Corp.

Location:	Pittsburgh, Penn.
Product:	SOAComply, which models and monitors the condition of applications and resources in a service-oriented architecture.
Origin of name:	Refers to baseline system conditions that the vendor monitors and companies use to evaluate operations.
Key executives:	CEO Stan Kramer, a former Cisco executive; founder and president Thomas Camden, a former manager of business development in Westinghouse Electric's core technologies division; and CTO Aruna Endabetla, a former Westinghouse project manager.
Funding:	Private
Fun fact:	TrueBaseline CEO Kramer operates several Qdoba Mexican Grill restaurant franchises in Oregon.



_THE INVASION

_DAY 4: My data has a life of its own. I can't control it. I can't manage it. I can't...get out.

_DAY 5: I called for help. I tapped out a distress signal with an allen wrench. Do the guys upstairs know Morse code?

XO spins off asset to go wireless

CLEC will go after fixed broadband alternative access market.

BY JIM DUFFY

XO Communications last week said it is spinning off its wireline assets to focus on fixed broadband wireless service to businesses and service providers.

The competitive local exchange carrier is selling its national wireline telecom business for $700 million to finance its transition. The buyer is Elk Associates, an entity owned by XO's controlling stockholder, Carl Icahn.

Icahn took control of XO after the carrier emerged from Chapter 11 bankruptcy restructuring in early 2003. Chapter 11 allowed XO to reduce its debt from more than $5 billion to $500 million.

The agreement culminates several months of evaluating bids, though it gives XO an option to consider other bids if a better proposal arises.

Qwest is reportedly considering XO's wireline assets (www.networkworld.com, DocFinder: 9744). The company would only say it "continues to evaluate opportunities that make business sense."

XO will retain its local multipoint distribution service (LMDS) fixed broadband wireless spectrum assets in the 28-to-31-GHz spectrum range, which covers more than 70 U.S. metropolitan markets. LMDS is a fixed wireless, point-to-multipoint line-of-sight technology best suited for alternative access in densely populated areas where installation of wires or cables would be expensive. It can reach speeds of up to 45M bit/sec, but distances are usually limited to about 2.5 miles.



XO's controlling stockholder, Carl Icahn, bought the carrier's wireline assets for $700 million.

"They do have a lot of spectrum, and if you put them up next to Sprint they're going to become the two significant potential players in that space," says Courtney Munroe, an analyst at IDC. "There's been some questions with the technology. [XO] said they have 10 miles line of sight — if that's true, that's pretty good."

XO anticipates operating its fixed wireless business under a new name, because the XO Communications brand name will remain with the national wireline telecom business. The transaction is anticipated to close late this year or early next year.

Munroe says he does not see any adverse effect from the split on XO's existing wireline or wireless customers.

Once the sale is completed, the wireless business will be debt-free and is expected to have in excess of $300 million in cash to fund its operations and for other corporate purposes.

XO's wireless services are available to businesses and wireless service providers in select markets. The carrier plans to launch its services on a wider basis soon.

The wireless and wireline companies are expected to sell each other's products and services. ■

nww.com

IT road map event

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DocFinder: 9429

At long last Microsoft ships database, development tools

BY JOHN FONTANA

Microsoft last week released two of the cornerstones for what it says will be its business application platform for the future.

In what was billed as its "most important release of the year," Microsoft after a two-year delay shipped Visual Studio 2005 and SQL Server 2005. The company also released a preview of BizTalk Server 2006, its business process-management software and the third leg of the application platform, with a beta due by year-end and final shipment in the first half of 2006. The launch was announced months in advance.

Microsoft says it hopes the close integration of the three products, and other software in its platform lineup, will raise its reputation in the corporate data center and become the platform for critical corporate programs such as trading floor applications.

"I have Web developers that know the Visual Studio [integrated development environment], so if you create it so the BizTalk development environment is also in the same [integrated development environment], even though there is some new features and functionality, it is a small stretch for my development team to do it," says Nick Wingeron, vice president for Citigroup's Corporate Investment Bank Technology in New York.

Wingeron is building an identity and routing hub for digital certificates using BizTalk and SQL that will be deployed early next year.

Microsoft hopes to extend the integration of Visual Studio across its platform products such as SharePoint, Windows clients, Office and packaged business applications, and wrap it all with XML, Web services and .Net.

"What you are going to see out of Microsoft going forward is a much higher level of integration between their tool packages and their back-end applications," says Rob Enderle, president of the Enderle Group. The integration is evidenced in Visual Studio 2005, which is the first set of tools that lets developers build applications that tie into Microsoft's emerging management platform called the Distributed Systems Initiative.

Microsoft says the integration of Visual Studio 2005 and SQL Server 2005 would show users they can build applications with better scale and performance.

Visual Studio includes support for .Net Framework 2.0 and the Visual Studio Team System, which supports collaboration among development teams. SQL Server features integrated data management and analysis tools. Last week, Microsoft also released 16 integration adapters for BizTalk 2006 that provide interoperability with business applications from Oracle and Siebel.

Microsoft also announced free versions of Express Editions of SQL Server 2005 and Visual Server 2005. ■

Ozzie memo highlights Microsoft's moves

A memo written by Microsoft CTO Ray Ozzie sheds more light on directions in which the company has been moving to make sure it doesn't miss the opportunity of the next generation of Web-based services, which industry analysts have dubbed Web 2.0.

Microsoft in recent months has shown that future versions of Windows and Office will support collaboration and personalized desktop services, based on a new business model leveraging ad sales and recurring services revenue that has turned rival Google into the darling of Wall Street.

Rather than reflect a sea change for Microsoft, Ozzie's memo, viewed by the IDG News Service last week, reinforces strategic moves the company has been slowly unfolding for several months.

The memo, part of an Oct. 30 e-mail sent by Microsoft Chairman and Chief Software Architect Bill Gates to Microsoft executives and engineers, proves that the company, which has shown a reluctance to let go of its software legacy, is ready to adapt to current industry changes.

Microsoft's challenge is to turn its successful software products into a seamless services platform — something Ozzie calls for in his memo.

For example, one of the key plans for the Microsoft Business Division, according to the memo, is to extend Office so it can easily connect to other applications.

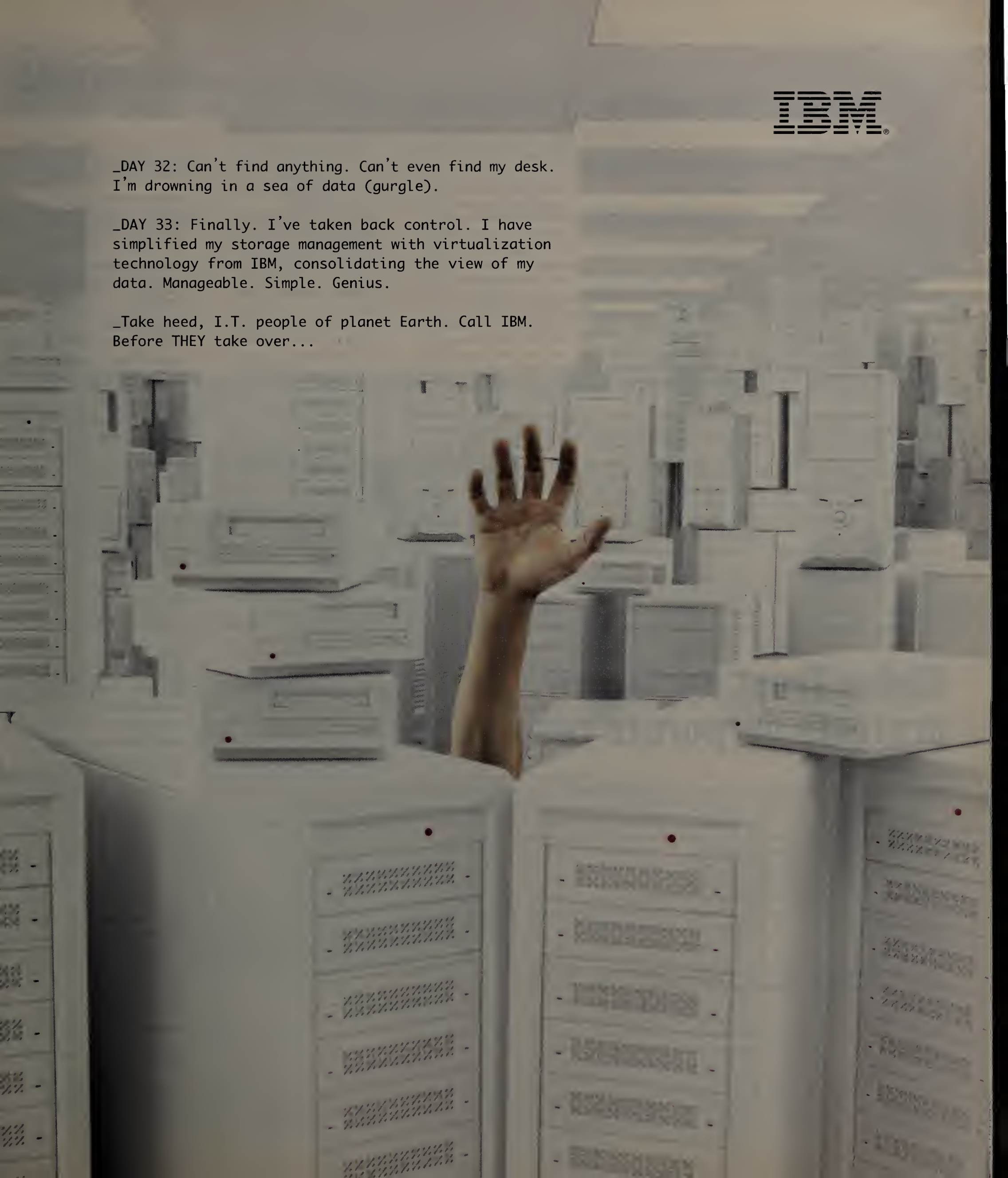
Microsoft says it would make standard XML the default file format for the next version of the productivity suite, code-named Office 12, a move that could make it easier for other applications to communicate with Office for the creation of services.

"What should we do to bring Office's classic [Component Object Model]-based publish-and-subscribe capabilities to a world where RSS and XML have become the de facto publish-and-subscribe mechanisms?" Ozzie asks in a section of the memo that describes the notion of a connected office.

Microsoft also has revealed plans to include RSS as a thread running through multiple applications in the next version of its operating system, Windows Vista, scheduled to be available at the end of next year.

Ozzie also wrote that the company must focus on helping customers create, find and organize documents and data among all the desktops, devices, servers and services to which they have access.

— Elizabeth Montalbano, IDG News Service


IBM
_DAY 32: Can't find anything. Can't even find my desk. I'm drowning in a sea of data (gurgle).
_DAY 33: Finally. I've taken back control. I have simplified my storage management with virtualization technology from IBM, consolidating the view of my data. Manageable. Simple. Genius.
_Take heed, I.T. people of planet Earth. Call IBM. Before THEY take over...

Tape

continued from page 1

tapes. But those who have bought or sold used tapes warn that doing so can put your confidential data at risk.

Dan Nutter, vice president of distributed storage at KeyBank in Cleveland, found this out firsthand.

Nutter says KeyBank was left with 8,500 old tapes containing customer financial information following a $500,000 media upgrade. The organization considered rewriting over the tapes, but Nutter says that would have taken as long as an hour per tape. So he turned to a reseller to take the tapes off his hands.

The reseller brought in a bulky gadget called a degausser — essentially a super-sized, supercharged magnet in a stainless steel box, to de-magnify the tapes and then resell them.

"We plugged the degaussed tapes back into our library and were still able to read the label on the cartridge, so we degaussed them again and put them back in the library and we were still able to read them," Nutter says.

The reseller returned with a more powerful degausser, which also failed to erase the tapes.

"We told them to have a nice day and we would find a way to get them burned," Nutter says.

Imation, as a maker of tapes, isn't shy spreading the word about what it sees as a sketchy resale market. The company says it bought linear-tape-open tapes from a reseller to find out if stories it had heard about shady tape resellers were true: that these companies were reselling tapes that hadn't been scrubbed clean, even though they were certified to be so.

"When we put them in a tape drive, we found customer data on three of four cartridges," says Tim Bjork, marketing manager for enterprise tape at Imation. "We took some of the data, found readable words, plugged them into a Google search and were able to link back to the company that sold the tapes in the first place.

"Organizations need to understand that if they sell their tapes they are putting their corporate assets at risk," he says.

Jeff Brown is sales manager for We Buy Used Tape, which buys and resells tapes. He says it is unfair to characterize all tape resellers as corner cutters, though agrees that customers need to be careful.

"It's a market where people try to buy tape and get it erased in the cheapest manner," he says.

One reason why some resellers don't erase the tapes or do so only partially is that degaussers can leave some tapes unusable, Imation's Bjork says. Certain tapes feature servo patterns — bytes of data written to the tape by manufacturers to align the tape to the tape drive — that degaussers can't erase without ruining the tapes, he says.

Dave Federspiel, sales manager for degausser firm Data Security, says some companies buy degaussers designed to erase video tapes, not computer tapes.

"They tell everyone that they can use these same degaussers for erasing computer tapes," he says. "[But] they just don't erase tapes completely."

The issue of unsafe tape handling has grabbed plenty of headlines this year, mainly because of incidents in which companies lost or improperly disposed of tapes that contained sensitive customer data. In May, for example, Time Warner said its offsite storage partner, Iron Mountain, lost 40 back-up tapes containing the names and Social Security numbers of 600,000 former and current employees.

"After seeing all the ways data can get loose when you dispose of tape, I only shred tape and get a certificate of destruction," says Hal Weiss, IS systems engineer for Baptist Memorial Healthcare in Memphis, Tenn. "That's the only way to guarantee your customer data doesn't get out and compromise your business."

When it comes to scrubbing tapes, many companies have adopted Department of Defense regulations. Regulation 5220.22-M stipulates that tape should be sanitized using a degausser or destroyed by incineration.

Data Security's Federspiel says customers need to pay attention to their media's coercivity factor, which measures how tightly the bits of data are bound to the magnetic media. He suggests following National Security Agency guidelines for media destruction, which include recommendations for which level of degausser to use for certain media.

He warns that incineration is more involved. "The challenge of incineration is that the byproduct of burning a tape is the thick black smoke and the release of a cyanide gas," he says. "The Environmental Protection Agency frowns on that."

All of which has encouraged some to consider extreme methods. Take, for example, this suggestion from the book *Unix & Internet Security* by Gene Spafford and Simson Garfinkel: Run your tape "through a band saw several times to reduce it to thousands of tiny pieces of plastic." ■

Tips for sanitizing tape

Experts warn that improper disposal or scrubbing of tapes can result in sensitive data winding up in the wrong hands. Their tips:

- Tapes with servo patterns — 3590, LTO, 9840 and 9940 — cannot be degaussed.
- 3480, 3490e, DLT, SDLT drives can be degaussed.
- Know the coercivity factor of your tape so you know whether a strong enough degausser is being used.
- Find out if your state allows incineration.
- Always get a certificate from the disposal service that your tape has been erased, shredded or destroyed properly.

CipherTrust appliance protects corporate resources

BY CARA GARRETSON

Messaging security vendor CipherTrust this week is expected to announce an initiative to extend its outbound communication protection beyond e-mail.

Early next year the company plans to release IronNet, a gateway appliance designed to enforce compliance and prevent information leaks by filtering outbound HTTP and FTP traffic. Augmenting the e-mail and instant-messaging security appliances the company already sells, IronNet aims to protect the remaining channels from which employees can send protected or proprietary information outside corporate walls.

Managed security service provider Gladiator Technology in Alpharetta, Ga., serves about 300 community banks and credit unions that grapple with compliance issues stemming from regulations such as the Gramm-Leach-Bliley Act and the Sarbanes-Oxley Act. Gladiator uses CipherTrust's IronMail appliance as part of its service to secure clients' e-mail communications and is considering adding IronNet to its portfolio. "They have to do certain things to meet these regulations and get through the auditing process, and that's a financial strain," says Ralph Sikes, CIO of Gladiator. "As these technologies improve with the ability to secure more layers [of communication], it puts that in reach of the [small to midsize business] market and allows them to have solutions they wouldn't have been able to have a year ago."

CipherTrust competes with SurfControl, Tumbleweed and MessageLabs.

Unlike CipherTrust's e-mail and IM appliances that scan messages coming into and going out of an organization, IronNet in its first release will only protect outbound traffic. The company is looking into developing capabilities that would protect inbound traffic as well, says CipherTrust CTO Paul Judge.

IronNet uses multiple detection techniques to scan outgoing traffic for information that is protected under federal regulations, as well as for proprietary or inappropriate information, Judge says. Outbound communication containing flagged information can be blocked, quarantined, alerted and encrypted.

Users of IronNet and other CipherTrust appliances can establish unified policies that are enforced across the products, using CipherTrust Central to manage these policies and generate reports.

Pricing for IronNet will start at $6,000. ■

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OFFICE MANAGER, EDITORIAL: GLENNA FASOLD
EDITORIAL OFFICE ADMINISTRATOR: PAT JOSEFEK
MAIN PHONE: (508) 460-3333
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Office systems undergoing big changes

BY NETWORK WORLD STAFF

BOSTON — You might think you've heard about every possible security vulnerability in your network, but what about your copiers?

"Network-connected output devices are becoming an absolute primary target of people, foreign and domestic, who are penetrating networks," said Jim Joyce, senior vice president for office services at Xerox Global Services. "Many of them are large devices with large disk drives, with a fair amount of memory and are network-connected and are not secure. This laptop [I'm using for this presentation] is probably 10 times more secure than any of the output devices we have in our environments today."

Joyce, speaking at the two-day Office Document Solutions conference in Boston last week, was among a number of presenters who implored makers of printers, copiers, scanners and other such devices to start thinking about more than just selling boxes to customers.

Joyce said during an interview after his speech that Xerox has poured about $20 million in recent years into technologies to better manage office and document systems and is putting a particular emphasis on security these days. He noted that some machines, such as multifunction devices, might have several operating systems in them that could provide security holes if not protected.

Look for Xerox in the months ahead to deliver more in the way of technologies that would enable document systems to be able to identify content so that companies can better prevent theft of intellectual property and other confidential data. Xerox's Palo Alto Research Center has been working on such technologies, Joyce said.

Meanwhile, other office document-product vendors said they seek to go beyond selling boxes.

While "solutions" might qualify as the single-most overused word in the IT industry over the years, presenters embraced it as a fresh concept capable of bringing new life to their industry.

Charles Pesko, a director at InfoTrends/CAP Ventures, greeted attendees at the consulting and research firm's event by stating that the U.S. copier market is maturing and that solutions are the answer to revenue growth. Not only do solutions — in the form of software, support and maintenance — offer revenue opportunities, but vendors that succeed here also will see a rise in hardware sales. For every dollar in solutions sold, a company will sell $4 or $5 of hardware with it, he said.

"A lot of people just don't get that yet," he said.

Among the biggest opportunities are document capture and creation, document management and document output management, said Joel Mazza, another InfoTrends/CAP Ventures director.

A panel of vendor representatives from Konica Minolta, Ricoh, Toshiba America Business Solutions and Sharp Electronics agreed that solutions are the way to go. However, they said it is difficult to change overnight given that the hardware business is worth tens of billions of dollars a year, whereas the solutions market is a sliver of that. Most of them said they are not making money on solutions so far, but consider their efforts in software, support and more as an investment that will pay off in the long run.

Bill Brewster, vice president of marketing for Konica Minolta Business Solutions, said every RFP his company gets includes a demand for at least one of four solutions offerings, such as security, device management, document management or workflow. The fact that delivering solutions can help sell boxes isn't a bad thing, he said, but emphasized that vendors need to commit to developing strong software and support offerings to make the solutions attractive.

The vendors also acknowledged they need to address how to encourage value-added resellers and other channel partners to sell the software given that current compensations systems are largely hardware oriented.

Wayne Lyle, IS director for law firm Preti Flaherty, shared with attendees his organization's experiences making strategic use of office document systems. Over the past few years the firm, which has 80 attorneys in five offices in New England, has rolled out software from eCopy and Interwoven to streamline handling of documents, as well as voice mail, e-mail and even dictation.

The system has enabled attorneys and their assistants to scan documents into a network system that allows for easy access and secure storage of documents that previously would have been stuffed in filing cabinets or stored elsewhere. "We feared electronic images were just going to explode and nothing would be there to control what we were doing," said Lyle, who works in Portland, Maine.

Having a document-management system in place has been important given the Sarbanes-Oxley Act and the Health Insurance Portability and Accountability Act. Even though those rules wouldn't typically apply to a law firm, Preti Flaherty is a full-service outfit that works with healthcare and other businesses that do have to stick to those rules. "We get hit with those regulations from all sides because our clients do," Lyle said.

Lyle said in an interview following his presentation that the firm's system handles roughly 1.5 million documents (largely in Word) and requires a couple hundred gigabytes of storage. But he foresees a time not far off when the law firm will need to split its master database to handle burgeoning volume.

On the broader issue of office document-system vendors needing to go beyond offering just boxes, Lyle said he is all for it and noted that the integration among his scanning, document management and office equipment played a key role in his purchase decisions. Partnerships between vendors are important given the variety of office equipment at most companies and the specific needs of organizations in different vertical markets. "I just hope it's more than talk," he said. ■

More than copiers

Makers of office document equipment are looking to bundle hardware with software and services. Here are categories of office document solutions as outlined by market watcher InfoTrends/Cap Ventures:

- Device management (remote diagnostics, device relationship)
- Document output management (routing, print tracking and security)
- Document capture/routing (scanning, forms/variable data, conversion)
- Document management and workflow (repositories, project management and collaboration tools)

NetIQ adds monitoring, auditing to directory tools

BY JOHN FONTANA

NetIQ last week released software that tracks changes in Active Directory. The tool is intended to provide corporate users with another weapon for handling compliance regulations.

With Change Guardian for Active Directory, users can audit and monitor directory changes in real time. Unauthorized or misconfigured changes can lead to users getting inappropriate access or to the opening up of security vulnerabilities. The tool plugs into NetIQ's Security Manager software or is available as a management pack for Microsoft Operations Manager.

"I am getting the ability to use a microscope and look at exactly what I want to look at," says David Valcik, vice president of information technologies at Beverly Enterprises in Fort Smith, Ark., which provides healthcare services to the elderly. Today the company uses NetIQ's Security Manager to audit the directory, which supports 45,000 users and 52,000 objects, but the software forces Valcik's staff to manually sift through log files.

"Anytime we can provide a tool to reduce the cost of auditing, and we can put some controls in place to leverage the tool — that is a win-win situation. If our auditors [internal and external] get comfortable that these tools are solid, it just helps us meet our requirements for Sarbanes-Oxley," Valcik says.

Change Guardian breaks down directory changes into three categories: managed, unmanaged and high-profile. Users can adapt this model to the current tools and procedures they use to manage Active Directory.

The managed-change category includes every change — such as the addition and deletion of users — that is made through the authorized interfaces defined by a company's policies, such as having NetIQ Directory and Resource Administrator as its Active Directory management tool.

Anything not going through an authorized interface — for example, an administrator using native Active Directory tools to add or delete users — is categorized as unmanaged change. This allows users to identify and investigate when changes are made outside normal operational procedures.

The high-profile category encompasses such changes to the directory as moving a global catalog.

Change Guardian comes preconfigured with a generic set of alerting and reporting rules and a tool that lets users create their own rules.

NetIQ's Change Guardian competes with similar products from NetPro and Quest.

The software starts at $1,200 per Windows domain-controller server. ■

Revised telecom reform bill meets opposition

BY GRANT GROSS, IDG NEWS SERVICE

WASHINGTON, D.C. — Republican draft legislation that would largely deregulate IP-based services, such as broadband video, favors giant incumbent telecom carriers over other competitors, said some witnesses and lawmakers during a hearing in the U.S. House of Representatives last week.

"The telephone companies, to us, appear to get everything they ask for . . . while avoiding most social obligations," said Marilyn Praisner, a member of the Montgomery County Council in Maryland, during a hearing before the House Energy and Commerce Committee's telecom and Internet subcommittee.

The staff draft, a revision of a bipartisan draft released in September, streamlines video-franchising requirements, allowing large telecom carriers such as Verizon and SBC to compete with cable TV providers without securing franchise agreements from multiple local governments.

The draft, a first step toward rewriting the wide-ranging Telecommunications Act of 1996, would require VoIP providers to provide enhanced 911 emergency dialing services, and VoIP and telecom service providers to exchange voice traffic, but it leaves negotiations about fees entirely to the carriers.

The draft, which creates a new regulatory category called broadband Internet-transmission services, is necessary because U.S. industry needs a clear legal framework for offering broadband services, said Rep. Joe Barton (R-Texas), the committee's chairman. "The advance of technology has left the law behind," he said.

Internet service provider EarthLink said the draft includes no enforcement of network interconnection requirements.

Some consumer groups and such Internet-based companies as Google, Yahoo and Amazon.com said that, with a handful of telecom carriers and cable companies controlling most broadband access, the bill doesn't have strong-enough protections for Internet users to access the legal content of their choice, and they need a legal guarantee.

A set of network-neutrality rules are in the draft bill, but broadband providers could cut off some content or services "under the guise of network management," said Gene Kimmelman, senior director of public policy and advocacy at Consumers Union.

The draft bill says broadband providers "may not unreasonably" restrict legal services or applications over their networks, but the bill doesn't define "unreasonable," he said.

The draft bill also would allow broadband providers to segment their IP offerings and reserve "huge chunks" of bandwidth for their own uses, added Vint Cerf, vice president and chief Internet evangelist at Google, in a letter to the committee. The bill lets providers create network capacity limitations, offer their own enhanced services over the network, and protect the security and reliability of the network.

"My fear is that, as written, this bill would do great damage to the Internet as we know it," wrote Cerf, one of the creators of TCP/IP. "Enshrining a rule that broadly permits network operators to discriminate in favor of certain kinds of services and to potentially interfere with others would place broadband operators in control of online activity."

SBC is committed to allowing its customers to access the legal content of their choice, said James Ellis, the company's senior executive vice president and general counsel.

But when Rep. Rick Boucher (D-Va.) tried to get Ellis to commit to legal language to guarantee broadband capacity for customers, Ellis wouldn't bite.

"Our position on this is, like so many other things, that heavy-handed regulation shouldn't be there," Ellis said. Customers "will have ample capacity."

Committee Democrats also complained that Republican leaders abandoned eight months of bipartisan negotiations that resulted in the bill's first draft. The revised draft is a "detour that's a likely legislative dead end," said Rep. Edward Markey (D-Mass.).■





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NET INFRASTRUCTURE

Short Takes

■ **McAfee** last week announced it is making available the beta version of its desktop-based policy enforcement software that can provide more than 400 security checks before allowing a LAN connection or remote VPN access. The **McAfee Policy Enforcer 1.0** can ensure that 14 different anti-virus programs are running or up-to-date, including programs from McAfee, Symantec and Trend Micro. The policy-enforcement software can ensure that up-to-date software patches are applied or that VPN software from vendors such as Nortel, Check Point, Cisco and Juniper are in use for remote connections. The Policy Enforcer software is managed by McAfee's ePolicy Orchestrator, which manages several other McAfee security products, according to Michelle Cobb, McAfee marketing director. There is no set shipping date or pricing determined for Policy Enforcer 1.0.

■ **Reconnex** this week is expected to announce an updated version of its iGuard content-monitoring appliance, adding a way to integrate with security-event management systems from ArcSight, Intellitactics and others. The new version includes a way to filter out content by country. The updated iGuard 2.1 appliance starts at $70,000.

■ **Check Point Software Technologies** announced new software, Integrity Anti-Spyware, which will be integrated into its Check Point Integrity software. This will let customers use a single security product from Check Point that includes spyware protection and endpoint security. Integrity Anti-Spyware detects spyware and quarantines or removes it, according to Check Point. Integrity Anti-Spyware is to be available later this month and can be purchased as part of a suite of products that costs $67 or more per user.

Big strides for small net firms

BY PHIL HOCHMUTH

While market leader Cisco is looking beyond its core LAN switching market for growth, smaller competitors with brands found more often in the isles of Best Buy and Circuit City are gaining ground in small and midsize businesses.

Even as Cisco looks to address smaller markets with its Linksys-One initiative — which combines Cisco and Linksys gear with MCI converged services for as many as 100 small-business end users — Cisco may find that many smaller businesses are getting what they need for LAN and wireless LAN (WLAN) technology from D-Link, Netgear, SMC and others.

Cisco has held the dominant position in market share for the LAN switch revenue for most of this decade. But in terms of the number of ports sold and installed, smaller vendors are giving the company a run. For 2004, Cisco held 68% of the $2.9 billion worldwide LAN switch market, according to market research firm In-Stat; however, it shipped only 28% of the 3.8 million ports sold. Right behind Cisco was D-Link, with 20% of shipments. Cisco's own Linksys SOHO brand was third, with 12.5%, and consumer networking power Netgear followed closely, with 11.5%.

Much of the shipment success of smaller firms is because of increased demand for Ethernet ports in consumer markets — such as broadband-enabled homes with integrated routers/LAN switches. But businesses also are putting what they call simple, effective LAN switch products from such vendors to work.

"The worldwide SMB market has approximately 80 million potential customers," says Norm Bogen, an analyst with In-Stat. Many of these firms use the Internet as an integral part of doing business, with technologies such as WLANs and Gigabit Ethernet evolving in small offices.

One such firm is ImageSource, a firm in Olympia, Wash., that sells document and image-management technologies. The company recently built a LAN based on Gigabit Ethernet in the core and 10/100M bit/sec at the edge with D-Link switches.

The need for Gigabit came as the company's bandwidth needs ballooned: High-resolution image management for clients involves scanning more than 1,100 pages of documents per day and up to 300G bytes of digital storage, says Shadrach White, the company's CTO. White says that sending 5M byte files over the LAN was taking as long as 12 minutes, and backing up a day's work took almost as long as it did to produce it — 18 hours over the network.

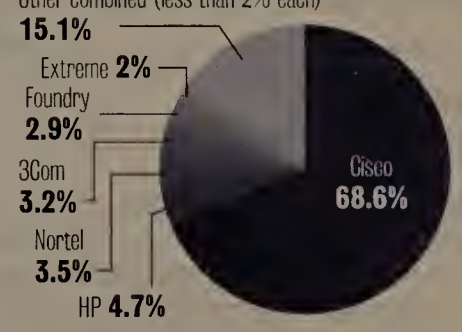
The firm uses DXS-3350SR stackable switches in its core, which connect 15

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A different ballgame

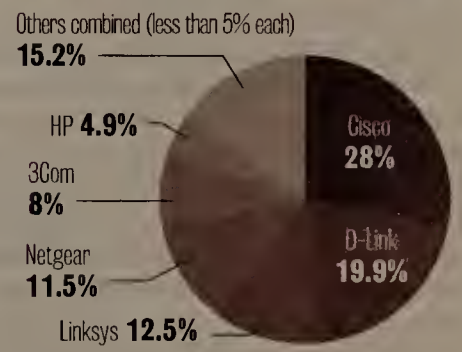
While Cisco is generally known as the dominant Ethernet vendor in terms of revenue . . .

Worldwide Ethernet equipment sold: $2.9 billion



. . . in the ports shipped department, the field is much tighter.

Worldwide Ethernet ports shipped: 3.8 million



SOURCE: IN-STAT

Vendor upgrades mail-filtering software

BY TIM GREENE

BorderWare is adding new filters to its MXtreme Mail Firewall to help customers better block spam, viruses and network flooding attacks.

With release 6.0 of its MXtreme software, the company is adding MXtreme Intercept Engine that looks at e-mail content and mixes it with information about where it came from to determine whether it is spam.

MXtreme devices are typically deployed in secure network segments between firewalls where they examine all incoming and outgoing e-mail. With the addition of the Intercept Engine, the devices mix in protection against phishing, viruses and denial-of-service attacks.

BorderWare competes against IronPort and Tumbleweed, and its equipment when clustered can handle millions of e-mails per hour, making it suitable for the largest businesses and service providers, says Michael Osterman, president of Osterman Research.

The software also adds optional access to BorderWare Security Network, a network of BorderWare customers that shares its filtering data so that spam can be filtered. If a sender has been identified as a spammer by any of the members, that information is shared and when e-mail with that address arrives at any customer's site, MXtreme filters it.

If customers don't opt in to the security network, the gear still creates local reputation libraries of IP addresses from spam.

The key asset of the software is the ability to create policies per user, says BorderWare customer David Braucht, senior security engineer at Resource Computing in Spokane, Wash. In the past, spam filtering on the device was tuned to one level, but not all end users have the same need for filtering, he says. Some would rather get more spam but be sure they are not missing any legitimate e-mail that is misidentified, he says. Others want minimum spam arriving in their in boxes.

"Now the policy feature allows a default that is really restrictive for some users, and

See BorderWare, page 22

Poll cites converged-IP security concern

BY JEREMY KIRK, IDG NEWS SERVICE

As viruses and malicious software bloom, senior executives across a range of industries see security as their top concern in implementing converged IP networks, according to a joint study released last week by the Economist Intelligence Unit and AT&T.

It's the second year in a row that the survey, which polled 236 executives in 50 countries, put security ahead of cost, says Denis McCauley, director of global technology research for the EIU. Security was ranked first at 26%, followed by implementation costs at 23% and the cost of new equipment at 19%.

Sixty-two percent of the respondents expect to implement IP networks in the next three years, although 63% said processing consumer data online put them at risk of security breaches.

McCauley says the study's results were noteworthy in that the greatest advantages of converged IP networks — openness across the enterprise to customer and company data — also is its greatest vulnerability. Companies also are using more mobile devices, creating more entry points into networks, he says.

The worms crawl in

An IP convergence study last week found 62% of the 236 executive respondents in 50 countries expect to implement IP networks in the next three years.

Executives, however, believe the biggest threat comes from people. The study showed that executives think most attacks come from inside their company as part of internal sabotage, spying by employees or unintentional mistakes.

Other threats such as phishing attacks — which mimic familiar commerce sites through e-mails to gain user names and passwords — are expected to increasingly target commercial organizations, the study said. In spear phishing, employees are sent an e-mail by someone masquerading as a higher-level executive asking for personal information.

It's likely the subordinates will respond quickly, according to the study.

Increasingly sophisticated denial-of-service attacks are directed against financial institutions, says Kees Vos, global offering manager for AT&T. The attacks are by professionals, says.

AT&T, which handles between 18% to 20% of all Internet traffic, collects data to try to predict emerging security threats, Vos says. It helps in preparing a remedy, because the time when a threat emerges and starts doing damage is decreasing, he says. ■

Small firms

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servers and high-end workstations with Gigabit Ethernet links. These switches also are used to connect 100 workstations and workgroup servers via 10/100 links, with Gigabit links back to the two core switches. (Each port on the boxes can run at 10/100/1,000M bit/sec).

With Layer 3, triple-speed Ethernet and slots for four fiber-based uplink ports, the DXS-3350SR matches up approximately to Cisco's Catalyst 3750 stackable switch. But the $3,600 price for the D-Link boxes was a better fit for ImageSource than the 48-port Catalyst 3750, which starts at around $14,000.

Business WLAN deployments are another area where consumer-focused network companies are finding success. Recently, the Crowne Plaza Hotel in Irvine, Calif., wired 335 guest rooms with Ethernet links, and provided WLAN access for guests and hotel staff with a mix of equipment from Netgear. David Giron, chief engineer for the hotel, priced a combined LAN/WLAN infrastructure (from a vendor that he would not name) at around $80,000. This was a mixed wired and wireless architecture that would connect users via WLAN only in the hotel lobby and some public areas, Giron says.

Instead, the hotel went completely wireless. The network now consists of Netgear ME103 ProSafe WLAN access points deployed individually in guest rooms, and some access points equipped with extended-range antennas for common areas, such as the lobby. The equipment cost $4,000.

Another firm deploying networks for hospitality customers says SMC is its network gear of choice. Integration firm Insystcom installed Ethernet LAN and very high bit-rate Digital Subscriber Line (VDSL)-based in-room broadband access technology for resort hotels in the Caribbean and aboard cruise ships. The Alpharetta, Ga.-based firm used SMC Ethernet switches and VDSL nodes for these installations. It uses SMC TigerAccess Extended Ethernet VDSL technology, which allows for 15M bit/sec links to guest rooms via existing telephone wiring. The wire connects rooms as far as 5,000 feet away from SMC switches, which tie the room into the overall LAN and connect to the Internet.

"It's not just cost," says Wil Riner, CEO of Insystcom, about the reason he uses SMC gear in his deployments. "It's [SMC's] understanding of the application. It's the packaging. A lot of the equipment goes right into the rooms — not the typical data center/wiring closet environments of a corporation."

He says the fact that SMC has a strong background in designing gear for the consumer networking market helps the product succeed in hotel deployments.

"It has a lot to do with the acceptability," he says. "How intrusive and how big are [are the devices]?" ■

Microsoft targets spyware

BY NANCY GOHRING, IDG NEWS SERVICE

Microsoft last week gave an official name to its software for protecting against spyware and detailed some upcoming features for the package.

The software, which has been known as Windows AntiSpyware Beta 1, will be called Windows Defender when the finished version becomes available next year, the company says.

A posting on Microsoft's TechNet Web blog announced the change and revealed some details about new capabilities. The current version of Windows AntiSpyware Beta 1 has 18 million users, Microsoft says.

Windows Defender will employ the same detection technology used in Microsoft's anti-virus engine, improving its spyware detection capabilities, according to the blog post. Spyware is software that monitors a user's online habits without the user's knowledge or permission.

When Defender finds spyware, Windows AntiSpyware presents the administrator with a list of threats found, details about each threat and recommendations for resolving it.

At the administrator's behest, Windows AntiSpyware removes every vestige of a spyware instance. Like Omniquad AntiSpy Enterprise and other competitors, Windows AntiSpyware can do a quick or full scan. Microsoft says the product will have a central console in the future.

The software also will protect users against rootkits and keystroke loggers, according to the blog. Rootkits hide potentially malicious files from security software. Keystroke loggers are programs that record keystrokes so that a hacker can discover a user's password or other sensitive information.

Windows Defender will have an updated user interface, and corporate customers will be able to receive Defender updates through Windows Server Update Services, Microsoft says.

Windows Defender will be part of Windows Vista, Microsoft's latest operating system, scheduled for release next year. It also will be available to users of Windows XP, Windows 2000 and Windows Server 2003, according to the company.

Users will be able to disable it and use anti-spyware software from a different vendor if they choose, Microsoft says. Windows Security Center, which alerts users if they aren't running an anti-spyware program, will recognize third-party anti-spyware software.

Microsoft obtained Windows AntiSpyware when it purchased Giant Company Software. In a recent *Network World* Clear Choice Test, Windows AntiSpyware detected 80% of test spyware. ■

BorderWare

continued from page 21

others can get a looser policy," he says.

The 6.0 software adds algorithms that automatically fine-tune the software during a learning mode to avoid false positives, something that was manual and time-consuming before, Braucht says.

New integration with Cisco IOS gear and F5 Big IP load balancers makes it possible to block unwanted e-mail traffic before it reaches the MXchange device, he says: "It lets you push the wall out even further."

Benefits include keeping Microsoft Exchange from receiving malformed e-mail packets that it tries to reassemble, resulting in Exchange shutting down, he says.

BorderWare also offers a new hardware platform based on Sun operating systems and AMD Opteron processors.

The company's previous platform was a proprietary operating system based on Intel processors. The device starts at $8,000 and supports 1,500 employees. It is available. ■

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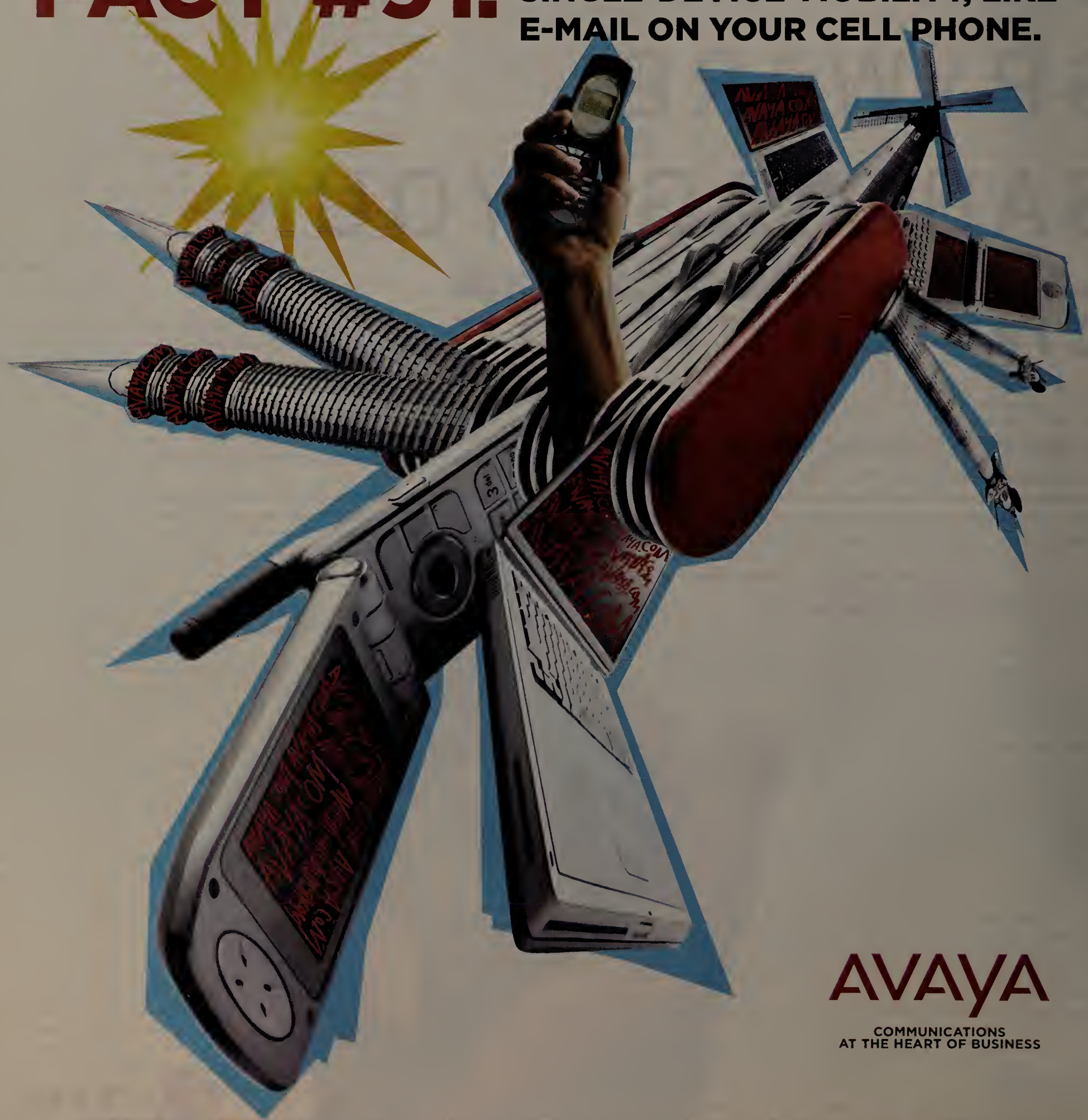
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Benchmarks™

Volume 2, Issue 9

2 **Coyote Point E350si traffic mgmt. switch surpasses F5 gear on performance and price**
Switch outperforms the F5 BIG-IP 1500, delivering more than 2X greater performance at less than 40% of the price



3 **Nortel Ethernet Routing Switch 5500 yields high performance and very low latency**
Nortel device delivers 320 Gbps of aggregate Layer 2, zero-loss throughput in a configuration of eight Ethernet Routing Switch 5510-48Ts with 320 GbE ports

4 **Citrix NetScaler Application Switch speeds response times, lowers bandwidth consumption**
Application acceleration device can accelerate the delivery of enterprise application data by as much as 44X

5 **Reflex Security intrusion appliance blocks attacks and still delivers high throughput**
Reflex IPS 100 delivers more than 100 Mbps of HTTP throughput while under attack, plus blocks more than 500 attack types

6 **Nortel gateway shines in SSL/IPSec evaluation**
Nortel VPN Gateway3070 offers highly scalable performance and key functions for SSL and IPSec users in an integrated design

7 **Netreo OmniCenter vastly simplifies network management integration**
OmniCenter provides extensive visibility into systems, network components and applications anchored on an enterprise network

8 **Level 5 Networks EtherFabric GbE interface outclasses LAN-on-motherboard rivals**
EtherFabric speeds network I/O operations while simultaneously improving and increasing host CPU efficiency

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THE TOLLY GROUP

Coyote Point traffic mgmt. switch surpasses F5 gear on performance and price

Coyote Point Systems, Inc. commissioned The Tolly Group to evaluate the Equalizer E350si, a Layer 4/7 load-balancing switch designed to serve up Enterprise-class throughput in a cost effective fashion. Furthermore, Coyote Point asked The Tolly Group to evaluate the Equalizer E350si solution alongside several comparable offerings from F5 Networks.

Tolly Group engineers tested the Equalizer E350si, measuring its Layer 4 connection rate, Layer 7 transaction rate and aggregate throughput (Mbps) at both Layer 4 and Layer 7. Engineers benchmarked the performance of the Equalizer E350si against an F5 Networks BIG-IP 1500 and a BIG-IP 3400, two devices that cost 2.5X to almost 4X more than the Equalizer E350si. Coyote Point intended to demonstrate that its Equalizer E350si offers more attractive price/performance than the F5 Networks products.

Results show that the Equalizer E350si outperformed the F5 Networks BIG-IP 1500 in every test, offered near-comparable performance to the much more expensive BIG-IP 3400, and offered compelling price/performance advantages.

The Coyote Point Equalizer E350si achieved 469 Mbps of throughput with 64-byte objects, which was more than twice the Layer 4 throughput offered by the BIG-IP 1500 (210.5 Mbps). With 2K-byte objects, throughput of the Equalizer E350si jumped to 702 Mbps, or about 32% more than the BIG-IP 1500's 475 Mbps. Further, the Equalizer E350si throughput with 2K-byte objects is just 21% less than the BIG-IP 3400.



The Equalizer E350si delivered Layer 7 throughput of 199 Mbps when tested with 64-byte objects, 633 Mbps with 2K-byte objects, and 729 Mbps when tested with 16K-byte objects. Those throughput results ranged from 30 to 51% higher than the throughput delivered by the BIG-IP 1500.

The Equalizer E350si offers an average Layer 4 throughput of 520 Mbps across the three object sizes tested at Layer 4; that equates to a cost-per-Mbps of $9.70, nearly five times less than the BIG-IP 1500. ($47.61) Analysis shows that the Equalizer E350si offers a Layer 7 cost-per-Mbps ranging from $8.22 to $30.13, which is four times less than either the BIG-IP 1500 or BIG-IP 3400.

In the end, the Equalizer E350si delivers greater value, delivering greater performance at less cost than either of the F5 BIG-IP products tested.

View the full white paper at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205131

- Outperforms BIG-IP 1500 in every test, offers near-comparable performance to the more expensive BIG-IP 3400, and offers compelling price/performance advantages
- Achieves more than twice the connection rate supported by the F5 Networks BIG-IP 1500 with 64-byte objects, at almost one-sixth the cost-per-connection than F5's BIG-IP 1500
- Supports 40% more Layer 7 transactions-per-second with 64-byte objects than the BIG-IP 1500 (44,375 tps vs. 34,199 tps) and 30% greater throughput (199 Mbps vs. 151 Mbps)
- Costs three to four times less on a cost-per-transaction basis, and 30% to 50% less in terms of the cost-per-Mbps of throughput served than the BIG-IP 3400

Layer 4 Price/Performance Analysis of Equalizer E350si vs. BIG-IP 1500/3400

Model (MSRP)	Object size	Connections/sec	Cost per cps (US$)	Throughput (Mbps)	Cost per Mbps (US$)
Coyote Point E350si (US$5,995)	64	78,885	0.08	468.6	12.79
	2K	31,996	0.19	701.7	8.54
	16K	5,518	1.09	777.8	7.71
F5 Networks BIG-IP 1500 (US$15,995)	64	34,156	0.47	210.5	75.99
	2K	21,460	0.75	475.1	33.67
	16K	3,413	4.69	481.9	33.19
F5 Networks BIG-IP 3400 (US$25,995)	64	137,398	0.19	811.5	32.03
	2K	40,753	0.64	893.5	29.09
	16K	6,599	3.94	930.4	27.94

Note: All BIG-IP prices are MSRP supplied by F5 during acquisition of the F5 gear by Coyote Point.

Sponsor: **Coyote Point Systems, Inc.**

Document number: 205131 Product Class: Layer 4-7 load-balancing switch

Products under test:

- **Coyote Point Equalizer E350si SW Ver 7.2.0d**
- **F5 Networks BIG-IP 1500 SW Ver 9.1.0 Build 6.2**
- **F5 Networks BIG-IP 3400 SW Ver 9.1.0 Build 6.2**

Testing window: **September 2005**

For more [illegible] http://www.coyotepoint.com

Tests reveal high performance, low latency of Nortel Ethernet Routing Switches

Nortel commissioned The Tolly Group in September 2005 to measure the Layer 2 switching performance, average latency and standard deviation of latency of the vendor's stackable Ethernet Routing Switch 5510/5520/5530.

Engineers measured the amount of usable throughput as experienced by users. In addition, they reported the stackable switching capacity, or the total switching throughput "external" to users and "internal" between switch stack elements. The "internal" portion of this is not directly usable by end-user applications.

In a dual-switch stack configuration (24 GbE ports, two stacking ports), the Ethernet Routing Switch 5510-48T in the bottom of the stack provided 160 Gbps of stackable switching capacity, that translates into zero-loss, Layer 2 throughput of 80 Gbps using 40 Gigabit Ethernet ports and two stacking ports for the Ethernet frame sizes of 64, 128, 256, 512, 1024, 1280 and 1,518 bytes.

In the next throughput scenario, consisting of an Ethernet Routing Switch 5510-48T in an eight-switch stack configuration (320 GbE ports, 40 ports per switch), the stackable switching capacity was 640 Gbps, which translates into zero-loss, Layer 2 throughput of 320 Gbps when tested with Ethernet frame sizes of 64, 128, 256, 512, 1024, 1280 and 1,518 bytes.

- **Delivers 640 Gbps of stackable switching capacity and 320 Gbps of aggregate Layer 2, zero-loss throughput in a configuration of eight Ethernet Routing Switch 5510-48Ts with 320 GbE ports**
- **Introduces extremely low average latency of 6 ~ 23 microseconds with 0 ~ 9.7 microseconds of standard deviation in the stack configuration**
- **Achieves 160 Gbps of stackable switching capacity and 80 Gbps of aggregate Layer 2, zero-loss throughput in a configuration of two Ethernet Routing Switch 5510-48Ts (40 GbE ports and two stacking ports)**
- **Provides 128 Gbps of stackable switching capacity and 64 Gbps of Layer 2, zero-loss throughput in a three-switch configuration of Ethernet Routing Switch 5510-48Ts (24 GbE ports and two stacking ports)**

The Nortel Ethernet Routing Switch 5510s in the stack configuration demonstrated very low latency and standard deviation by recording 6 ~ 23 microseconds of average latency with 0 ~ 9.7 microseconds of standard deviation. "Standard deviation of latency" is a measure of how much the latency of a set of received packets varies from the mean. It is similar to jitter.

The Tolly Group also tested the Ethernet Routing Switch 5510-24T in a special three-switch stack configuration. The Tolly Group verified that the Ethernet Routing Switch 5510-24T in the middle of the stack provided 128 Gbps of stackable switching capacity, or 64 Gbps of zero-loss Layer 2 throughput using 24 Gigabit Ethernet ports and two stacking ports for the Ethernet frame sizes of 64, 128, 256, 512, 1024, 1280 and 1,518 bytes.

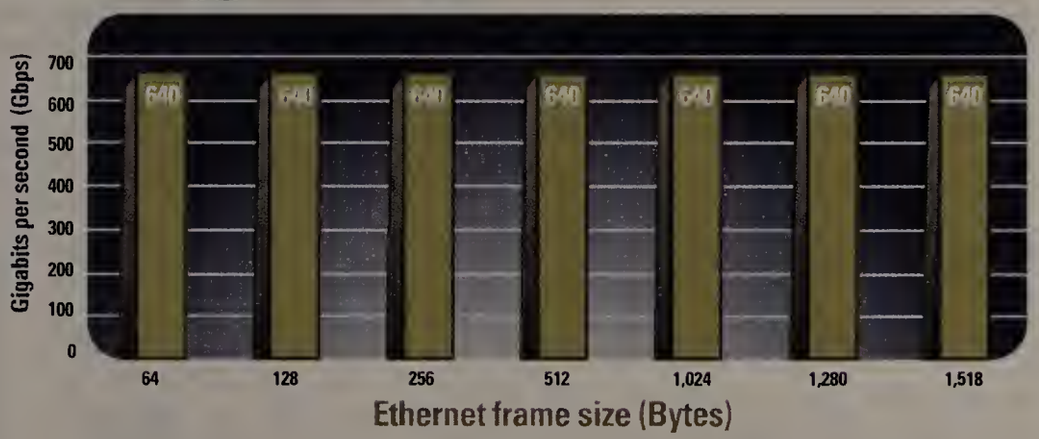
Finally, Tolly Group engineers measured the zero-loss Layer 2 throughput of the Ethernet Routing Switch 5510-48T in a stand-alone switch configuration. The Tolly Group verified that the Ethernet Routing Switch 5510-48T provides wire-speed throughput for all ports by recording 48 Gbps of zero-loss Layer 2 throughput using 48 Gigabit Ethernet ports for the Ethernet frame sizes of 64, 128, 256, 512, 1024, 1280 and 1,518 bytes.

Engineers also evaluated an Intelligent Auto Unit Replacement resiliency feature, examined the switches' ease of use and their management facilities.

View the full report at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205137

NORTEL

Stackable Switching Capacity
of Ethernet Routing Switch 5510-48T in an Eight-switch Stack Configuration (320 GbE ports)
As reported by SmartBits SmartFlow



Sponsor: Nortel
Document number: **205137**
Product Class: **Stackable switch**

Product under test:
- Ethernet Routing Switch 5510
- Ethernet Routing Switch 5520
- Ethernet Routing Switch 5530



Testing window: **September 2005**
For more info on this test, visit: http://www.nortel.com

Citrix NetScaler Application Switch speeds response times, lowers bandwidth consumption

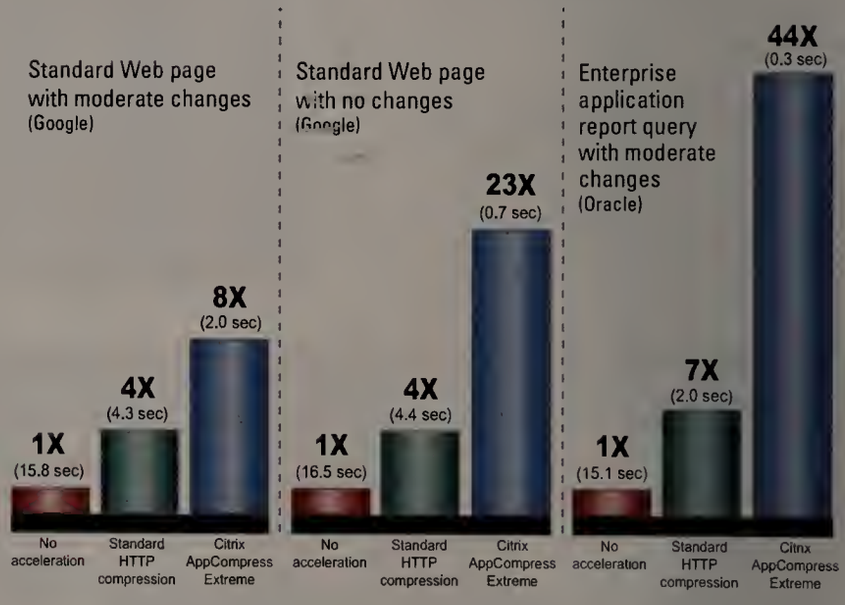
- **Can accelerate the delivery of enterprise application data by as much as 44X**
- **Can improve the download times for public Web pages by up to 23X**
- **Can reduce user response times by more than 97.7% and lower bandwidth consumption by 98%**
- **Speeds application performance more than standards-based HTTP compression**
- **Enhances application performance with no modifications to application code or changes to browser configurations**

Citrix Systems, Inc. commissioned The Tolly Group to examine the effectiveness of the Citrix® NetScaler® Application Switch, a purpose-built appliance that provides real-time compression for application data, including the ability to compress encrypted and unencrypted data for Web and client/server applications.

The objective of this evaluation was to measure application performance improvements yielded by Citrix's new AppCompress Extreme™ technology. Tolly Group engineers tested application acceleration benefits by measuring the total round trip time (in seconds) for an actual client requesting and receiving application data from both a popular public Web site and a commonly-used enterprise application. The tests were performed using a live Internet connection whose connection speed was throttled to simulate a true end-user experience.

All performance measurements were made at Tolly Group facilities in Boca Raton, Florida, and all content was hosted at Citrix facilities in San Jose, California. Tolly Group engineers tested AppCompress Extreme in a variety of customer scenarios using both 56 Kbps and 256 Kbps simulated connection speeds.

Application Acceleration Improvements
Over a Simulated 56-kbps Dial-up Connection



Note: Application data was hosted in Citrix's San Jose, California facilities and accessed via the Internet by a Microsoft IE version 6.0 client at The Tolly Group's testing facilities in Boca Raton, Florida.

Tolly Group testing determined that Citrix's AppCompress Extreme differential compression technology improved the performance of standard Web page downloads by as much as 44X, and sped the delivery of enterprise application data by 23X. AppCompress Extreme not only reduced response times for the application client, but also lowered overall bandwidth consumption by as much as 90%.

The Citrix NetScaler Application Switch with AppCompress Extreme delivered improved performance through the use of differential compression technology which computes the differences in application data occurring between an initial client request and all subsequent requests. Once the differential is computed by the Citrix appliance, only changed data is sent to the client. By eliminating the transmission of redundant data over multiple requests, the Citrix NetScaler Application Switch improves overall application response times by transmitting far fewer bytes than is required with traditional HTTP compression techniques.

View the full white paper at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205138

Sponsor: **Citrix Systems, Inc.**
Document number: 205138
Product Class: Application Acceleration

Products under test:
- **NetScaler Application Switch – Model 9950**

Testing window: June 2006

For more info on this test, visit:
http://www.citrix.com/netscaler

Reflex Security intrusion prevention appliance blocks net attacks and delivers high performance, reliability and ease of use

Reflex Security, Inc. commissioned The Tolly Group to test the Reflex IPS 100 network intrusion prevention appliance. The Reflex IPS blocks a comprehensive range of malicious traffic, including HTTP attacks, Denial-of-Service attempts, scans, backdoor exploits, floods, viruses, and worms.

The Tolly Group validated the performance of the Reflex IPS 100, as well as the appliance's effectiveness at detecting and preventing a variety of attacks. The Tolly Group also evaluated the system's reliability, reporting and ease of use.

Sponsor:
Reflex Security, Inc.

Document number: **205136**

Product Class:
Intrusion prevention appliance

Products under test:
- **Reflex IPS 100 ver. 4.4**

Testing window:
September/October 2005

For more info on this test, visit:
http://www.reflexsecurity.com

The Tolly Group measured the maximum mixed-object size HTTP throughput across the Reflex IPS 100 with the Avalanche test tool that emulates complete HTTP transactions (TCP open – HTTP data transfer – TCP close). Each client requested 15 different HTTP data sizes ranging from 43 to 64 Kbps.

Tests show the Reflex IPS 100 delivered more than 100 Mbps of HTTP throughput under normal conditions. When Tolly Group engineers introduced attack traffic in the form of more than 500 various security events, the Reflex IPS 100 maintained more than 100 Mbps HTTP throughput. In both scenarios, the Reflex appliance exceeded its rated 100-Mbps bidirectional throughput capability.

Next, Tolly Group tests confirmed the Reflex IPS 100 successfully blocked attack structures generated by the BLADE Software IDS Informer testing tool. The Reflex device continued to block attacks while sustaining more than 100 Mbps of background traffic. (Please check out the Test Summary #205136 for full details at http://www.tolly.com.)

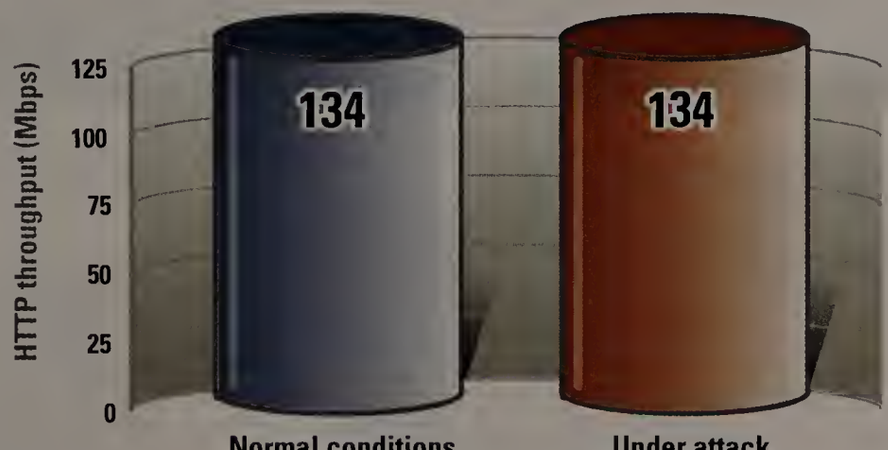
The Tolly Group also tested the reliability of the Reflex IPS appliance, which uses the Sentrium™ disk-on-chip architecture. Sentrium eliminates the need for a hard disk within the appliance and the related performance and failure concerns. Tolly Group tests confirmed the appliance's ability to consistently fail-open or fail-closed as configured. As a result, administrators can set policy to allow traffic to pass or be denied in the event of a device malfunction.

Tolly Group engineers also noted that the Reflex IPS 100 offers a powerful, fully-customizable reporting capability with event aggregation/correlation, robust centralized. management, and rapid installation. Engineers verified an initial install required just 30 minutes.

Overall, Tolly Group tests confirmed the Reflex IPS 100 was able to meet or exceed its stated capabilities for performance, comprehensive security, reliability, ease-of-use and management.

View the full report at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205136

Reflex IPS 100 Mixed-Object Size HTTP Throughput



Note: Reflex IPS 100 maintains 134 Mbps throughput rate even while handling attack traffic load.

Nortel gateway shines in SSL/IPSec evaluation

The emergence of SSL VPNs is forcing users to determine how best to integrate the nascent technology alongside installed IPSec VPN gateways. The vast majority of SSL VPN providers offer point-specific solutions, meaning their gateways support SSL VPNs only. This has enormous implications for management and for TCO.

Nortel has designed its Nortel VPN Gateway Portfolio with the installed base of IPSec VPNs in mind. Nortel's solution provides blended support for both Web-based SSL VPN access and IPSec VPN users which vastly simplifies the access requirements of highly mobile users needing access from many locations and device types.

Nortel commissioned The Tolly Group to evaluate the Nortel VPN Gateway 3070. Tolly Group engineers benchmarked the throughput of the Nortel VPN Gateway 3070, examined the limits of the device's scalability and identified the extent of voice quality supported by the gateway. Testing was performed at The Tolly Group's Boca Raton, Fl., facilities in March 2005.

Tests show that the Nortel VPN Gateway 3070 delivers consistent throughput when tested across workgroups scaling from 10 users, to 5,000 users. Scalability tests show that even as the number of users scales to 5,000, the device does not sacrifice significant throughput. Finally the Nortel VPN Gateway 3070 proved it can secure VoIP communications and SIP applications without impacting voice quality.

Tolly Group engineers also examined the SSL VPN functionality of the Nortel VPN Gateway 3070 and came away impressed with the application access, end-point security, access controls, overall VPN scalability and Nortel's ability to support secure real-time multimedia and VoIP services over SSL VPN.

The integrated support for IPSec and SSL VPNs in a single box ensures users that they deploy one box instead of two, and that box is configured and managed more easily than rival offerings that require a box dedicated to SSL VPNs and another dedicated to IPSec VPNs. Such solutions do not scale well, and present significant cost implications for widespread deployment.

Nortel's approach to SSL VPNs shows that it respects the investments enterprises have made in IPSec, and the company understands that IPSec VPNs will be around for quite some time.

Check out the full white paper on The Tolly Group's Web site at:

http://www.tolly.com/DocDetail.aspx?DocNumber=205103

NORTEL

- **Provides steady-state SSL throughput of 600 Mbps, 422 Mbps and 294 Mbps for no encryption, RC4-MD5 and DES-CBC3-SHA encryption respectively during the 25-user test**
- **Delivers consistently high 3DES VPN throughput even under heavily loaded conditions (5,000 user tunnels)**
- **Demonstrates secure toll-quality VoIP call performance even with the VoIP traffic protected by SSL VPN**
- **Exhibits VPN technology integration coupled with high scalability and performance to yield lower deployment TCO**

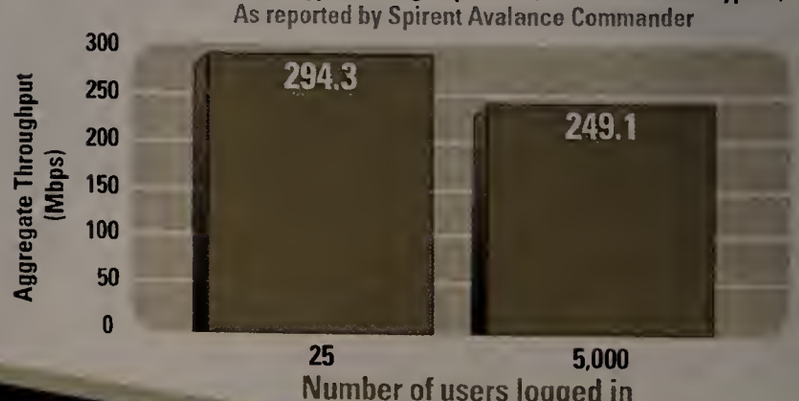
Sponsor: **Nortel**
Document number: **205103**
Product Class: **SSL/IPSec VPN Gateway**

Products under test:

- **Nortel VPN Gateway 3070 version SSL-5.0.3**

Testing window: **March 2005**
For more info on this test, visit: http://www.nortel.com

Steady-state SSL Throughput with 25 and 5,000 Users
(Front-end encrypted using Triple DES, back-end unencrypted)
As reported by Spirent Avalance Commander



Netreo OmniCenter vastly simplifies network management integration

Sponsor: **Netreo, Inc.**

Document number: 205134

Product Class: Integrated network management suite

Products under test:

- **OmniCenter**

Testing window: **August 2005**

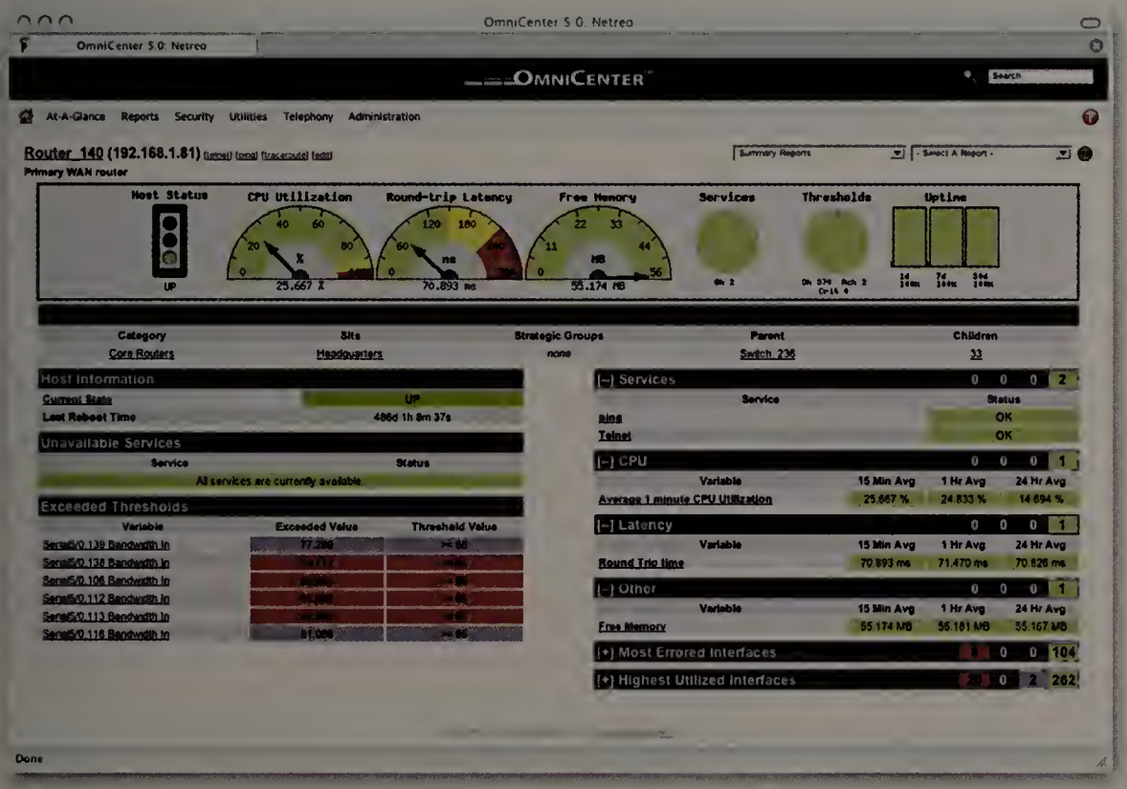
For more info on this test, visit: http://www.netreo.net

Netreo, Inc. commissioned The Tolly Group in August 2005 to conduct an extensive hands-on evaluation of the company's OmniCenter™, a family of self-contained, fully integrated IT monitoring, alerting and reporting tools that provide easy-to-deploy and, ultimately, cost-effective network management.

Tolly Group engineers examining OmniCenter found that the offering provides extensive visibility into systems, network components and applications anchored on an enterprise network. OmniCenter is based upon a clientless architecture that forgoes software agents in favor of using common protocols to collect management data. This support for a range of standards-based protocols ensures rapid deployment, painless integration and minimal administration overhead.

In our hands-on assessment during configuration and deployment, we encountered a product that offers flexibility and simplicity for joining an existing enterprise network and configuring OmniCenter to collect data from network resources.

Device configuration itself required just about 15 minutes, and configuring OmniCenter to monitor and collect data for a number of test bed devices required about two hours. Obviously, users with large numbers of devices would require additional time, although OmniCenter's support for device templates will help reduce installation effort.



Many network management tools require extensive time and expertise to make them run in the most fundamental way. Consequently, users often must deploy a small army of expensive engineers and administrators dedicated to the network management tools.

OmniCenter, by contrast, offers near zero administration. OmniCenter also cuts down drastically on the report generation that must be handled by personnel, automating the process instead. All of this adds up to significant cost savings and rapid ROI. In short, the payback time for OmniCenter is just a few months, versus an entire year of costs created by complex management infrastructures.

Beyond costs, users need to consider the soft benefits of the OmniCenter service. The ability of the service to reduce annual high latency minutes, and reductions in downtime minutes, equally translate to sizable hard dollar savings. Users need to consider the simplicity of OmniCenter and how it enables cost savings versus complex network management infrastructures and the army of specialists they demand.

View the full white paper at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205129

Level 5 Networks EtherFabric Gigabit Ethernet NIC outperforms conventional Ethernet for accelerated application performance

Level 5 Networks, Inc. commissioned The Tolly Group to evaluate its EtherFabric EF1-21022T, a dual-port Gigabit Ethernet (GbE) network interface that is designed to replace a traditional GbE interface seamlessly and accelerate application performance by speeding network I/O operations and improving host CPU efficiency by streamlining network processing.

The Tolly Group conducted a battery of three tests on the EtherFabric EF1-21022T and compared its performance against two leading conventional Ethernet LAN-on-Motherboard (LoM) chipsets, a Broadcom BCM 5721 NetXtreme Gigabit Ethernet Controller chipset (integrated in an IBM eServer xSeries 336) and an Intel Corp. 82541EI Gigabit Ethernet Controller chipset (integrated in a Dell PowerEdge 1850 server).

Tests showed conclusively that the EtherFabric EF1-21022T enabled a molecular dynamics high performance computer simulation application called GROMACS to scale significantly, over conventional Ethernet. EtherFabric delivered as much as 167% more simulation runs per day (equal to 419.17 thousands of picoseconds of simulation per day) than the conventional Ethernet LoM solution. The test involved running the simulation on 16 processors connected using both Gigabit ports on the EtherFabric NIC bonded into a single channel, called EtherFabric striped-mode.

Sponsor: **Level 5 Networks, Inc.**

Document number: 205125
Product Class: PCI-based Gigabit Ethernet NIC

Products under test:

- **EtherFabric EF1-21022T**
- **Broadcom BCM5721 NetXtreme Gigabit Ethernet Controller chipset**
- **Intel Corp. 82541EI Gigabit Ethernet Controller**

Testing window: June 2005

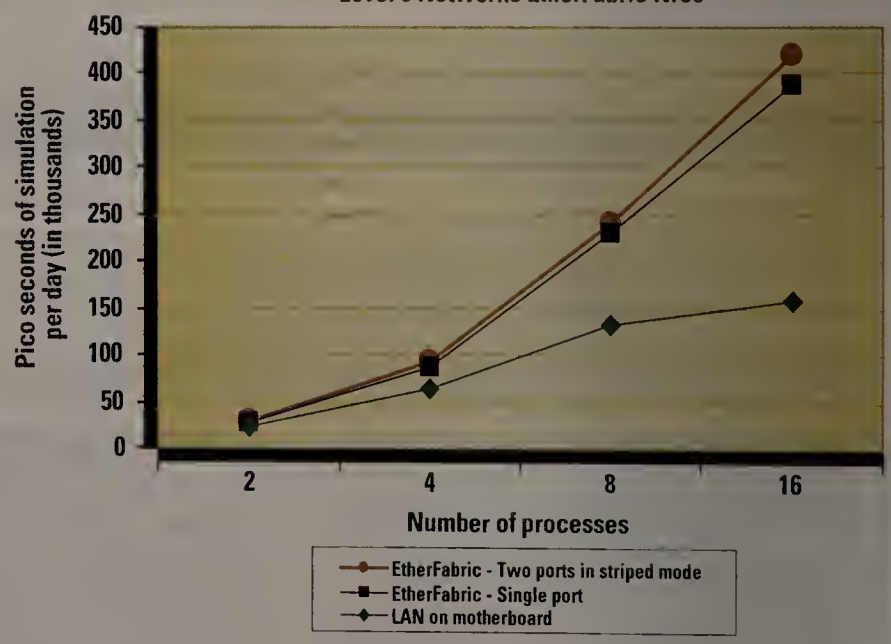
For more info on this test, visit:
http://www.level5networks.com

In EtherFabric striped mode with only eight processes active, the EtherFabric EF1-21022T delivered 81% more simulation time per day than the LoM solution, 45% more with four processes active and 23% with two processes active.

Engineers also measured the latency between applications and EtherFabric's ability to increase the available bandwidth using the NetPerf performance tool. Netperf is a benchmark that provides tests for both unidirectional throughput, and end-to-end latency. The EtherFabric EF1-21022T delivered more than double the unidirectional TCP throughput when tested with smaller, more taxing message sizes of 64 bytes, in single-port mode versus both an Intel

Scalability Comparison of Level 5 Networks EtherFabric versus LAN-on-Motherboard

GROMACS Molecular Simulation over SCALI MPI 8-node Cluster of dual Xeon-based Dell PowerEdge 1850 Servers populated with Level 5 Networks EtherFabric NICs



82541 chipset (residing in a Dell PowerEdge 1850) and Broadcom BCM5721 chipset (embedded in an IBM eServer xSeries 336). The EtherFabric EF1-21022T delivered up to 33% more throughput at 128-byte message sizes in single-port mode.

The Tolly Group also used the PingPong test of the PALLAS PMB MPI-1 benchmark to measure the one-way latency for various message sizes. The EtherFabric EF1-21022T introduced about one-fourth the one-way latency of the LoM technology, for 0-byte messages.

View the full white paper at:
http://www.tolly.com/DocDetail.aspx?DocNumber=205125

ERPRISE COMPUTING

LINUX ■ SERVERS ■ STORAGE ■ GRID/UTILITY ■ MOBILE COMPUTING

on tightens grip on handheld devices

ON, IDG NEWS SERVICE

s used in corporations been like an executive's ed and maintained by gh paid for by the boss. they're evolving into a ghtly controlled by the reasons of security and

y, a vendor of mobile e-mail software, last week expanded its product line to help IT maintain that grip even as employees travel. Good Mobile Defense, an optional add-on is scheduled for release in January for the company's GoodLink wireless messaging software, lets administrators control five key aspects of security policy over the air (see graphic), says Dan Rudolph, director of product management at Good.

The product is based on SureWave Mobile Defense, which Good acquired earlier this year through its purchase of JP Mobile. It uses the GoodLink messaging mechanism to reach and modify devices in the field, Rudolph says.

Tools on the market now let administrators control mobile devices, such as software that disables the digital cameras built into phones. But the IT department has to get the device into its hands or rely on the user to carry out changes, according to Rudolph.

"One of the shortcomings in the past has been IT's inability to enforce the policies once the device is in users' hands," he says. "It's been incumbent on the user to actually comply with and download the policies that IT sets."

Good Mobile Defense lets administrators manage passwords, encryption and more.

Industrial Bank, in Washington, D.C., earlier this year chose GoodLink to give executives, loan officers and some other employees mobile access to their Microsoft Exchange e-mail. It has issued Palm Treo 650 handhelds from Cingular Wireless to 25 employees so far. GoodLink had security capabilities that Research In Motion's (RIM) BlackBerry products didn't have, including

See Handheld, page 28

Mobile management

A sampling of Good Mobile Defense capabilities:

- **Advanced password management,** including setting and resetting passwords for devices and applications, as well as forcing employees to use strong passwords.
- **Device use control,** such as blocking access to Bluetooth, Wi-Fi, camera or synchronization software.
- **Application lockdown,** in which IT can create and modify a "white list" of programs users are allowed to download and run.
- **Encryption management,** application-specific rules about which types of data on the device have to be encrypted.
- **Data erasing,** for setting policies on what actions — such as three failed password attempts — should trigger the erasure of all data on the device.

affects **Linux** sys-
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by anti-virus compa-
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WIRED WINDOWS
Dave Kearns



Skeleton in Web app closet

When Bill Gates and Ray Ozzie rolled out Windows Live and Office Live a couple of weeks ago, they didn't use the phrase "Web 2.0," but they did appear to embrace some of what that phrase embodies. The Live products are all about Web-based services that you can combine ("mash," in the parlance of Web 2.0) and/or build to create useful, even personalized, applications and output. What they didn't mention, though, is the same dirty little secret that most Web 2.0 proponents would rather you didn't think about.

That skeleton in the closet is what one developer termed the "drive-by upgrade." Writing on O'Reilly's Macintosh weblog (www.networkworld.com, DocFinder: 9728), Fraser Speirs, a developer from Scotland, recounts what happened to his carefully crafted assemblage of information based on Google maps. Then Google "upgraded" the maps service, and the new version didn't interact with the Mac's Safari browser in the same way, so Speirs would need to redo much of his hard work.

Before you decide to roll out a new application or a new service for your users, you always (I hope) test it in the lab first. Then, depending on its potential for mischief, roll it out to small subsets of your user base, gradually checking along the way that everything is working correctly.

Even after all that, should a potential flaw be discovered it's relatively easy (if time-consuming) to roll back the upgrade or even reinstall the last-known good version of the application or service. Google wasn't going to do that for Speirs; would you expect Microsoft to do it for you?

It's not as if upgrades to Microsoft applications and services go smoothly, right? Just about every Windows upgrade in the past five years has broken something. Even changes to Microsoft Office applications can cause hardships as, for example, when a new format in Word isn't recognized by older versions.

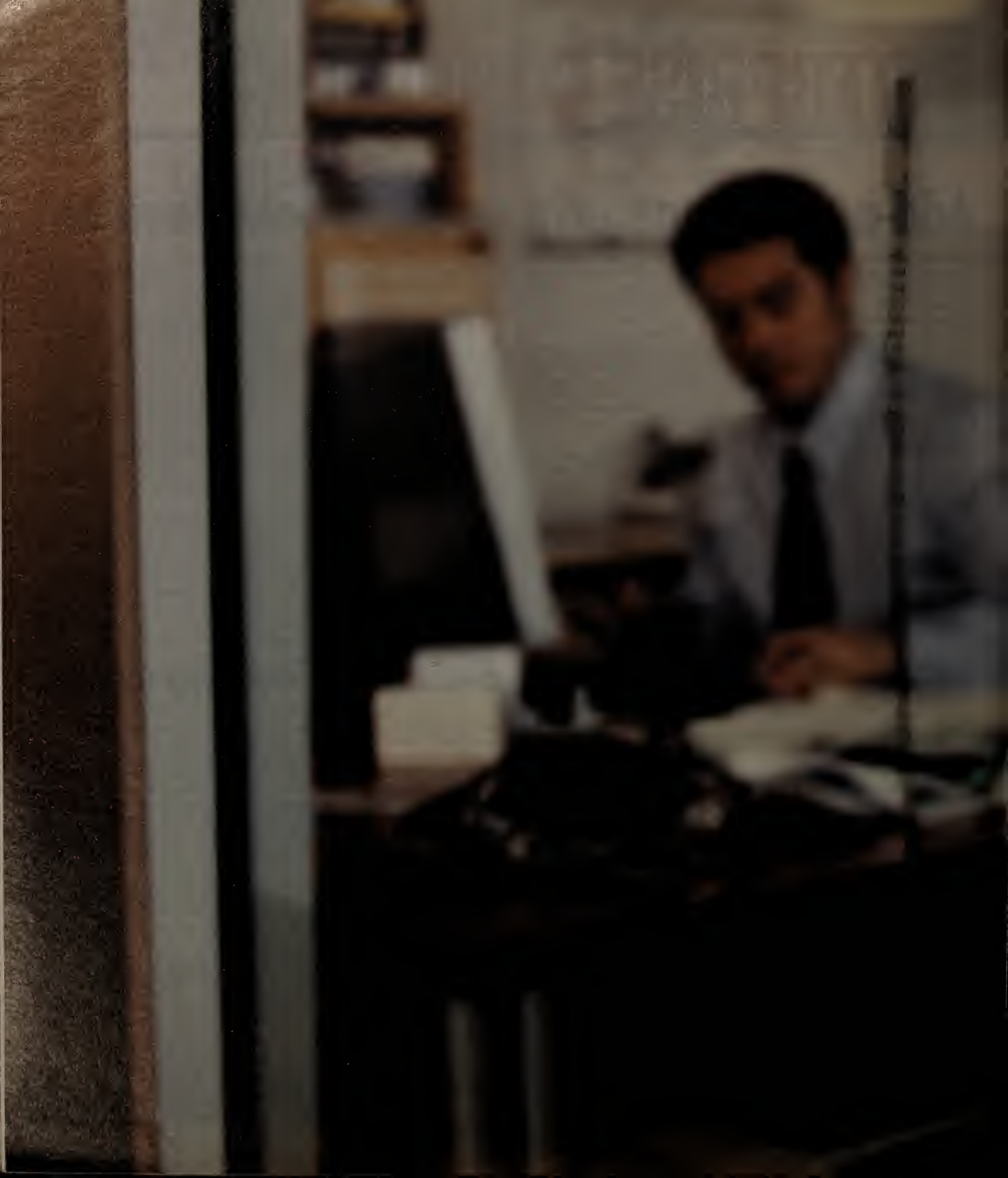
While Windows Live and Office Live are targeted at home users and tiny businesses (those with fewer than 10 employees), the trend has always been for users to clamor at work for the same features they have at home.

It's not too early to be active with warnings to your users about the hidden pitfalls of Web-based applications that are beyond their (and your) control. Creating whiz-bang output is only good as long as you can read it. Betamax video and eight-track audio also were once the latest technology.

Kearns, a former network administrator, is a freelance writer and consultant in Silicon Valley. He can be reached at wired @vquill.com.

Tip of the Week

■ "From the start, the World Wide Web has been a vessel of quasi-religious longing." So begins Nick Carr's essay on Web 2.0 (DocFinder: 9729). It's a must read for technological realists who have to battle daily against the notion that computers (and the Web) can produce miracles.





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- **Free Tools and Updates:** Streamline patch management with automated tools like Windows Server™ Update Services. And verify that your systems are configured for maximized security with Microsoft® Baseline Security Analyzer.
- **Microsoft Risk Assessment Tool:** Complete this free, online self-assessment to evaluate your organization's security practices and identify areas for improvement.
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- **Learning Paths for Security:** Take advantage of in-depth online training tools and security expert webcasts organized around your specific needs. Then test your security solutions in virtual labs, all available on TechNet.

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Microsoft

Atempo adds encryption to data manager

BY DENI CONNOR

Atempo last week introduced software that lets customers encrypt data on storage devices and protect it from tampering and eavesdropping.

The new Security and Compliance Manager (SCM) software runs on top of Atempo's existing Time Navigator software and provides digital signatures, hierarchical key management, strong encryption, hash algorithms and detailed reporting to protect data. Time Navigator protects and migrates data across heterogeneous environments and multiple storage architectures, including direct-attached, network-attached and Fibre Channel, as well as IP storage-area networks.

SCM can be used for record retention and compliance purposes to make sure data is not altered. It uses Advanced Encryption Standard 256 and Triple-DES encryption.

Maurice Auger, IT manager for Data Base File Tech Group (DBFT), a storage-service provider in Victoria, British Columbia, plans to implement SCM.

"We have a storage back-up and archival system we sell on a subscription basis to customers," Auger says. "We use Time Navigator to back up these clients. One of the challenges is these customers need to back up more securely, whether it's financial or medical data."

Auger uses the Blowfish encryption in Time Navigator. With SCM, he will be able to offer clients a variety of encryption methods.

Time Navigator captures and categorizes structured database and unstructured e-mails and files and passes them to SCM, which encrypts them. The data is then backed up, and when necessary moved from more-expensive primary storage to less-expensive secondary storage or tape as it ages and is accessed less often.

Time Navigator SCM provides templates for the Sarbanes-Oxley Act, the Securities and Exchange Commission 17a, the Health Insurance Portability and Accountability Act and other regulations. With the templates, organizations also can set retention and deletion policies.

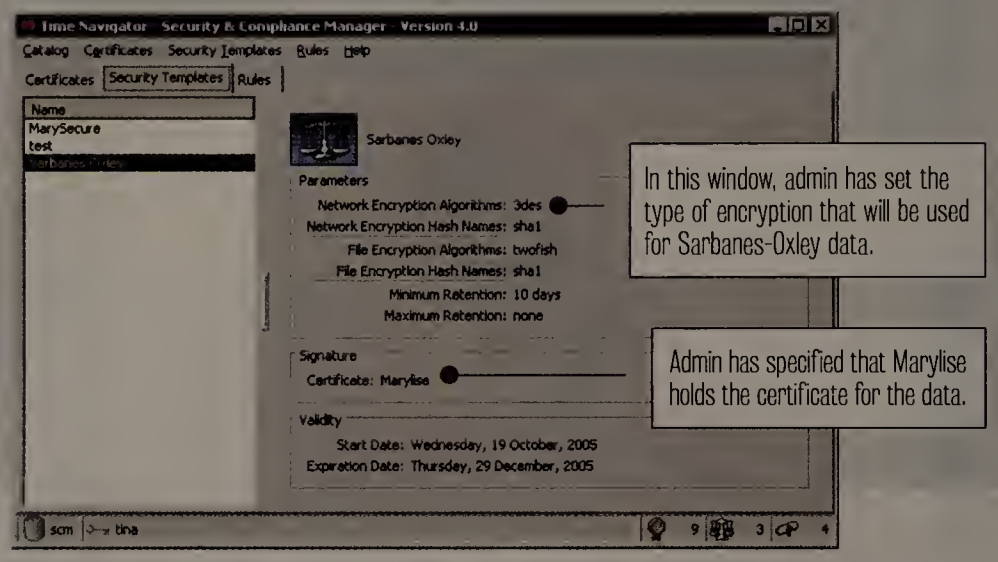
SCM competes with appliances from Decru and NeoScale, which sit in the data path and like SCM intercept data as it is backed up.

It is one of the first back-up products to include encryption. Symantec, for example, supports encryption in NetBackup, whereas EMC's Legato Networker does not.

Time Navigator software resides on a Windows, Linux, AIX, HP-UX or SGI Irix back-up server and protects all these environments, as well as Mac OS X, NetWare and VMS servers. Time Navigator SCM is priced by the number of servers and storage nodes protected. It starts at $7,500 for 10 clients. ■

Atempo's security and compliance module

Software lets IT use templates to enforce security for data that must be protected for compliance purposes.



Handheld

continued from page 25

compliance with Federal Information Processing Standards, says Michael Johnson, the bank's director of information services. These capabilities helped the deployment plan pass a rigorous review by management, he says.

Johnson says he welcomes Good Mobile Defense for maintaining central control of the remote devices. He says he wants the ability to lock out features of the Treos, enforce password policies and delegate specific capabilities to employees based on their roles. The bank delivered the Treos to users without the synchronization cable for uploading content and applications from a PC, and employees don't have the administrative rights to load the Palm Desktop synchronization software on their PCs.

Johnson says he hopes to deploy custom loan-processing applications to the Treo 650s. Having loan applications on handheld devices could allow loan officers to cut hours or days from approval time or even approve loans while at the borrower's location, he says. Industrial is a relatively small bank, with about $300 million in assets and eight branches in Maryland and the District of Columbia, and the market for loans is highly competitive, Johnson says. "As a bank that doesn't have the resources of, say, a Bank of America, we've got to use every advantage we can," he says.

Users need mobile devices with e-mail and application access, and security is a critical concern, says Kitty Weldon, an analyst at Current Analysis. Once handhelds are used to access corporate databases or applications, the IT department will want to own and control them, she says.

Good is facing tough competition from RIM's BlackBerry handhelds and its BlackBerry Connect software for other vendors' devices, as well as from Microsoft as it rolls out Windows Mobile 5.0, Weldon says. RIM's system is quite secure when used with a BlackBerry, but Good now seems to have the edge over Windows Mobile and BlackBerry Connect, she says. "If there is room for a third, it's going to be Good," Weldon says.

Existing customers of Good will be able to buy Good Mobile Defense starting in January, and later, users will be able to buy it on a monthly basis through carrier partners that sell Good's software, Rudolph says. Prices have not been set, but a one-time license fee should be less than $100 per user, he says. Added to the monthly fee for a carrier's data plan, Good Mobile Defense would probably cost between $5 and $7 per user, he says. Customers who don't use GoodLink could buy the Good Mobile Defense but would not get the over-the-air management capability.

Good also announced last week that it will preload McAfee VirusScan Mobile in the Good Management Console, which is used to control GoodLink. IT administrators will be able to more easily push the anti-virus software out to employees' devices. The McAfee software will be available in a trial version, and companies can buy full licenses from McAfee, Rudolph says. They also will be able to set policies regarding the presence of the anti-virus software, such as requiring that it be on the device before any other software is loaded, he adds. ■

nww.com

Wireless blogger

Let Senior Editor John Cox keep you up to speed on wireless nets. Recent posts highlighted a wireless mesh project in Michigan and a proposed law for wireless hot-spot security.

DocFinder: 9733

Linux promoted for mobile phones

BY JOHN COX

A new vendor group plans to create specs for Linux-based phone services.

The Linux Phone Standards Forum (LiPS) will outline APIs and Linux systems services for phones running the open source operating system. Programmers, handset makers and network operators will then quickly be able to create and deploy telephony applications for Linux devices, according to LiPS members.

"We want to create a standard Linux implementation" for phones, says Michel Gien, vice president of the LiPS executive committee and executive vice president of corporate development for Jaluna, a LiPS founder. "Motorola has created Linux phones, but they had to do it from scratch. A standardized platform makes it easier to create these products."

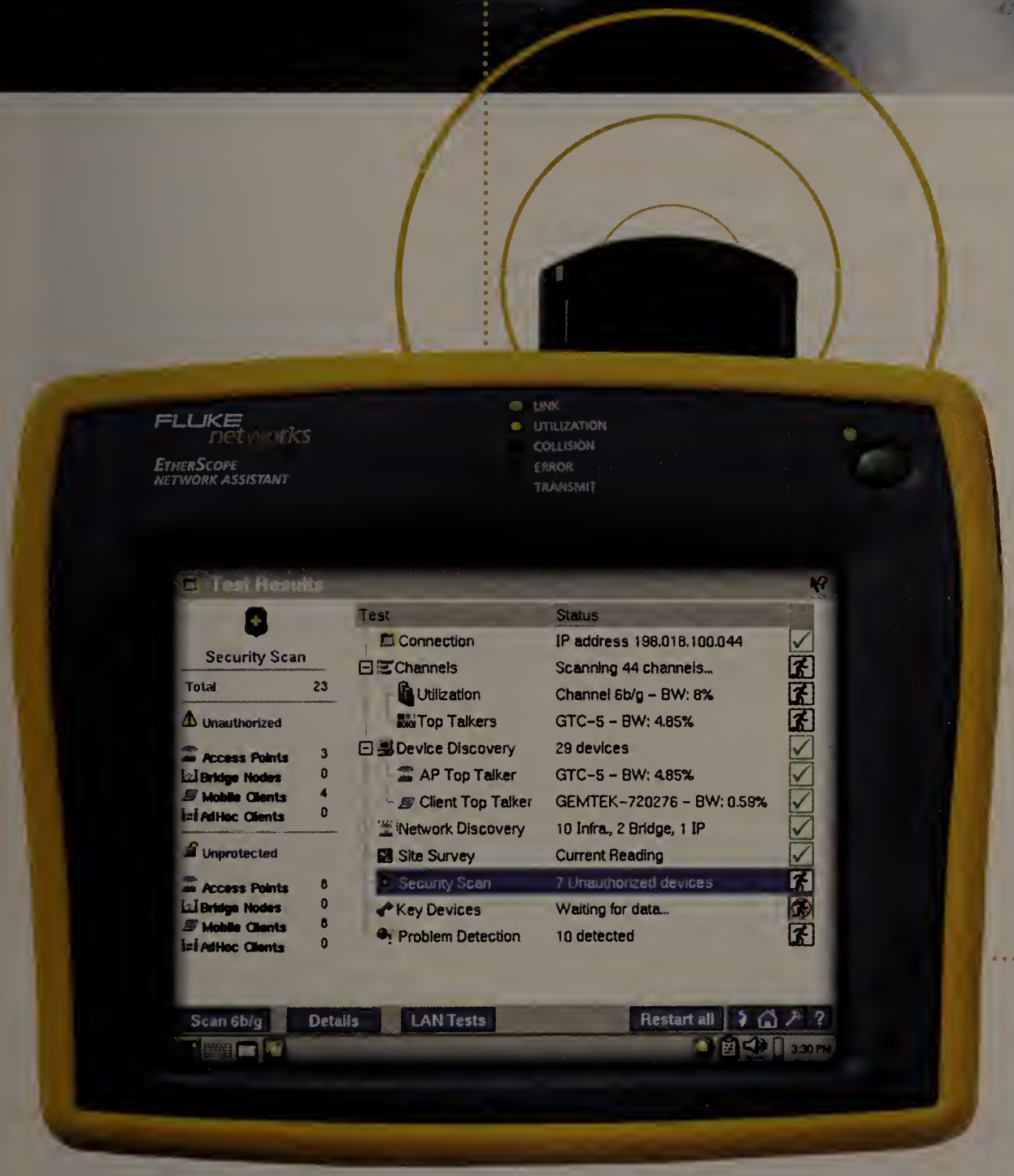
Founding members include Arm, France Telecom/Orange, Open Plug and PalmSource.

As open source, Linux is an attractive alternative to proprietary handset platforms from Microsoft and Symbian, supporters say. Groups such as the Open Mobile Terminal Platform Group and Open Mobile Alliance have been defining a range of low-level functions on Linux mobile phones, such as fast boot times and power management.

But LiPS will focus on defining high-level interfaces needed to create and interact with carrier-based services, Gien says. The group plans to create a testing and certification process and to have its first specifications for basic functions and interfaces ready in early 2006. Products implementing the specs should appear about a year later. ■

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Improving network security and performance is rarely as simple as plugging in a box. This time it is.

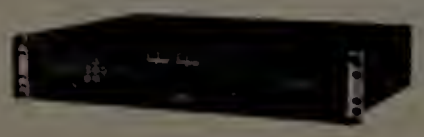
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APPLICATION SERVICES

Short Takes

■ **Computer Associates** is selling its Ingres database technology to private equity firm Garnett & Helfrich Capital, which is forming a new company, Ingres Corp., to develop and market the open source software. The financial terms of the deal were not disclosed. CA released Ingres last year as an open source product, reviving interest in the software. Databases have never been a core part of CA's portfolio; CA CEO John Swainson cast the Ingres sale as part of a larger effort to streamline the collection of applications CA acquired during the 1990s, one of which was Ingres (from a 1994 buyout of ASK/Ingres). CA retains a minority ownership stake in Ingres. Garnett & Helfrich Capital, headquartered in Menlo Park, Calif., was formed last year and has a fund of $350 million with which it invests in midsize technology spinoff ventures.

■ **InfoVista** last week announced a software product that could help IT managers plan for server capacity. **VistaInsight for Servers 2.0** measures the utilization of a company's server infrastructure. It also groups servers based on what they are supporting — an Oracle database, for example. InfoVista says the enhanced software allows IT managers to get a corporatewide view of their servers' performance in supporting business applications and services. The software also provides metrics, such as server- and application-response time, that reveal how well a company's servers respond to demand. VistaInsight for Servers 2.0 is available; prices start at $35,000 to $40,000.

■ Messaging management vendor **Lucid8** this month will release continuous-data-protection software that helps protect e-mail stored in Microsoft Exchange. DigiVault is disk-based backup designed to help end users prevent data loss and to aid in the recovery of corrupt mailboxes on the Exchange server. The software includes a feature called SingleTouch, which lets users recover data from any point in time. Initially, DPM backs up data only on Windows file servers and network-attached storage devices, not application-layer data. DigiVault is expected to ship by year-end and is priced starting at $695 for 25 mailboxes.

Q&A

BMC CTO talks IT management



BMC Software CTO ***Tom Bishop,*** *formerly CTO of Tivoli Software, came on board at BMC earlier this year, bringing his 20 years of IT management experience to help BMC evolve from a point-product vendor to an IT service management provider. Recently, Bishop spoke with* Network World *Senior Editor Denise Dubie about his plans and directions for the company.*

Tell me about your responsibilities at BMC.

One of the primary responsibilities I have is helping drive a key part of BMC's Business Service Management strategy, the whole integration platform called Atrium. I am currently involved in the design and the implementation of that technology within the R&D organization.

Could you elaborate a bit on the Atrium platform?

BMC has been known as a very good point-product company — having good products in a lot of different areas but not having made a significant investment in integration technology in the past. Certainly not, for example, in the way that people historically viewed Tivoli. What we have been doing now for a couple of years is integrate a number of products together around what we call pillars. There are five pillars [in] Atrium. There is a presentation component, which consists of the dashboard and reporting pillars. There is a CMDB [configuration management database] component, which is specified by ITIL [Information Technology Infrastructure Library]. We've got a service model, which is also being added as part of the CDMB, and finally we are embracing Web services as a core component of the Atrium architecture. All these form the

See Bishop, page 32

Sniffer gets enterprise-scale upgrade

BY DENISE DUBIE

Network General last week detailed product enhancements that will make it possible to centrally manage distributed copies of its popular Sniffer protocol-analysis tools.

The company, which McAfee sold to investors for $275 million last year after acquiring it in 1997 for $1.3 billion, says the enhancements are just one example of efforts underway to return it to its former glory.

Investors have brought in new management — company President Michael Pope joined in March — and have ratcheted up head count from 450 to 600. Pope says that at the time of the buyout there were only four people in support. Now there are 40, and R&D has climbed from 130 to more than 200 employees. About $30 million was spent on R&D last year, and about that same amount will be spent this year.

"We have invested heavily in R&D to take our protocol-analysis and troubleshooting expertise to a higher level for enterprise customers," Pope says. He adds that the upgrades will send competitors such as NetScout scrambling, because Sniffer "is no longer just a point product."

Network General has enhanced multiple products in its Sniffer portfolio, as well as enabled its Distributed, Portable and InfiniStream core product suites to better interoperate.

Sniffer Infinistream 2.5, a LAN traffic-monitoring and packet-capture tool, has added ATM WAN support. With the product's 4T-byte storage capacity, network administrators can troubleshoot problems on a range of links by replaying packets captured over hours or days. The company also announced the i120 appliance, which is a 1U device designed for network-edge and small network deployments that can capture months of network traffic data and can store up to 300G bytes of data. The i120 complements the existing i1620 appliance, which has 4T bytes of storage and comes in three models, and the i420, another packet-capture appliance that comes with 1T byte of storage.

Sniffer MultiSegment Intelligence is a software product that runs on top of other products and tracks the performance of Web-based applications across network, server and database environments. Network General says the product targets environments that generate HTTPS and SQL traffic, such as Oracle, IBM DB2, MySQL and Microsoft SQL Server.

Sniffer Enterprise Administrator 4.0 makes it possible to collect in real time and store data from as many as 100 distributed Sniffer probes loaded with software agents. The software comes loaded on a Windows XP server and auto-discovers Distributed Sniffer appliances, and also is available as software only.

The products are scheduled to be available next month, when Network General will determine pricing. The company plans to share the news with more than 100 customers at its Sniffer User Summit 2005 this week in Miami.

Jeff Duke, senior network engineer for the State of Indiana in Indianapolis, is beta-testing the upgrade of the Visualizer reporting tool to support 25 distributed Sniffers installed at key points of the network, which supports 30,000 end users. Duke also uses Sniffer Portable tools for on-the-spot troubleshooting and problem resolution. Duke says Visualizer 4.0 is a boon, letting him collect data in 20 minutes where it used to take 24 hours.

"We use Sniffer to troubleshoot and diagnose network-related application-performance problems," Duke says. "I've dealt with Sniffer for about 10 years and when they made it possible to remotely manage and monitor distributed Sniffers and report on the traffic there — instead of lugging a laptop out and hoping to catch the problem — for me, it was the best thing since sliced bread." ■

Sony's anti-piracy 'khesterex thath'



NET INSIDER
Scott Bradner

The latest entry in the "all my customers are thieves" parade is Sony Music, but no one could see the company marching along. Sony was finally discovered in this parade when a researcher found and disabled the Romulan- or Klingon-like cloaking system that the company had surreptitiously installed in PCs that had been used legally to play some Sony music CDs.

The discovery raised quite a ruckus, just like the last time a music company tried to slip in restrictions on the buyer's ability to use a product. You would think music companies would learn to just be clear about what they are doing.

The arrogance of companies that secretly install software when the customer uses a product as it is intended to be used is quite amazing. Such companies act as if the only use of the customer's PC is in conjunction with their product. They do not consider what would happen if all vendors installed their own special software; the user's PC could quickly become unusable because of hundreds of programs running at the same time.

But the situation with the Sony system is a particularly bad one. Not only does Sony sneak software onto your machine, but the software could be used to hide all sorts of malware. With this demonstration, Sony also has told the bad guys how to make their evil adware and spyware even harder to find and eliminate. Internet researcher Mark Russinovich has posted a detailed description of the Sony abomination and how it works (www.networkworld.com, DocFinder: 9734).

Even worse, hundreds of other companies and Internet attackers could decide to write and surreptitiously install their own cloaking software on your computer. Each of these could be hiding different sets of programs.

Once installed (by listening to a Sony music CD on your PC), the Sony software renders invisible any program whose name begins with sys. That is a very useful function if you are in the business of stealing secrets from unsuspecting PC users. You can render invisible any software, big or small — just like the Klingon cloaking device of "Star Trek" fame.

Who knew that Sony was a Klingon front company? Well, come to think of it, that might explain the text in some of the instructions I've seen from them over the years. Maybe they were partially translated from Klingon.

Sony installing any software on your computer, just because you want to listen to music that you legally purchased, is a bad idea. But not making it clear that this is the bargain the user has agreed to is cheating. It's a case of a company not having the guts to be upfront about the bargain so a potential purchaser can decide whether he wants to buy a product that requires him to agree with that bargain.

According to one of the Klingon Web sites, there is an old saying that goes: "When you choose to cheat to win a battle, you have already lost." I expect that by trying to hide what it was doing, Sony has managed to lose a battle it might otherwise have at least fought to a draw — a "khesterex thath" (Klingon for "screwed-up situation") indeed.

Disclaimer: As far as I can find out, Harvard does not offer a class in Klingon (or in cloaking software or devices), so the above observation must be mine.

Bradner is a consultant with Harvard University's University Information Systems. He can be reached at sob@sobco.com

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Bishop

continued from page 31

backbone of the integration strategy that makes BSM real.

Have management vendors seen a demand from customers for better integration?

There's a pretty clear market shift within organizations that we talk to, and this has been true for some time now, that IT organizations have to become more business-focused. In order to deliver on that business focus or to make it easier for IT organizations to work in a business context, information that has traditionally been kept in disparate places and managed in very disjointed and discrete ways now has to be integrated in some way. Probably the most common way — and the approach being embraced by BMC — is around a core set of IT service-management best practices.

Do you think management vendors should take on the onus of integration for customers?

I absolutely do. I spend a fair amount of my time — about half — communicating externally for the company, and a lot of that time is spent talking with customers. One of the single most important requirements we hear over and over again is that customers would prefer management vendors do a much better job of integrating their products than they have done in the past. It will make it easier for the customer to use the products and get value more quickly without a lot of time and effort doing integration.

Aside from technology, how does BMC help customers get their BSM strategies in order?

An important thing for us is to capture the best practices but offer the solution in such a way that customers have multiple on-ramps. Rather than saying, "here is a fully integrated IT service management solution that embraces process and best practices, buy the whole thing," we are offering a more incremental approach. There isn't [just] one way to get into a more service-oriented IT management approach. BMC, in particular, has eight "routes to value." It's our way of saying, "here's where you want to get to, but you all aren't starting in the same place." The next step for one customer could be tacking [on] asset management, but for another it could be incident management. What we tried to do is basically have it both ways: We deliver an integrated solution that has a clear road map associated with the steps or progression [that] we recommend organizations take, but [we try] not to be too prescriptive with that. We have a flexible solution that allows you to start in several different places and then take the next steps as those steps are appropriate to your particular need and your environment — but with confidence that they all integrate.

What technologies do customers most request from BMC?

We have customers coming to us talking about the big picture. Because of the budget pressures of the last few years, IT departments are finding they have to prove the business relevance of what they are doing, or it gets outsourced. I've spoken with customers who have looked at every piece of IT, and if they couldn't find how it helped them do better business, they cut it or outsourced it.

Any technologies rising to the top of the heap?

The two top themes we are hearing from customers are BSM and CMDB, with identity management probably being a close third. Those are the three that people ask for and want to talk about, because they are either concerned or scratching their heads about them. And we understand that these are potentially large undertakings, so we are offering ways to consume it all in smaller, bite-sized chunks. [A new technology] has got to find a way to integrate with what they currently have and it also has to be incremental in nature.

How does BMC tie BSM to its identity-management products?

Within the CMDB, all the various IT processes operate against a consistent view of the underlying environment. By tying together information about configuration items, associating various roles, responsibilities and administrator access, and associating that information with the configuration items, we can now integrate identity management into configuration and asset management in a way that was hard to do in the past.

How quickly can IT managers see results with a BSM rollout?

It's an evolutionary process that takes time, but I think an organization should expect to start to see results within three to six months if they go about it in the correct way.

What is the biggest challenge for management vendors to evolve their products to meet IT managers' business-oriented needs?

The industry has evolved. I would say the classic four vendors — BMC, Computer Associates, HP and IBM Tivoli — have all frankly not been as aggressive about understanding the changes that were happening in IT as they needed to be. All of us have been waking up to the realization that IT needs to be managed with the business. It's a challenge for us to get out of our own skin that we've had in the past, and we've got to help people understand that we are a different kind of company ready to address new IT management problems.

Is BMC open to integrating with its competitors?

The key requirement is to do this in a way that is truly open. We can begin to integrate with third-party products. We don't go into shops where they don't have CA, HP or IBM. I'm sure they see BMC in their shops. And any vendor that doesn't have a mechanism or provide within their solution or architecture the ability to integrate with what the customer already has is just not going to fly. Companies have spent tens of millions of dollars on these investments, and they aren't going to walk away from them lightly. ■

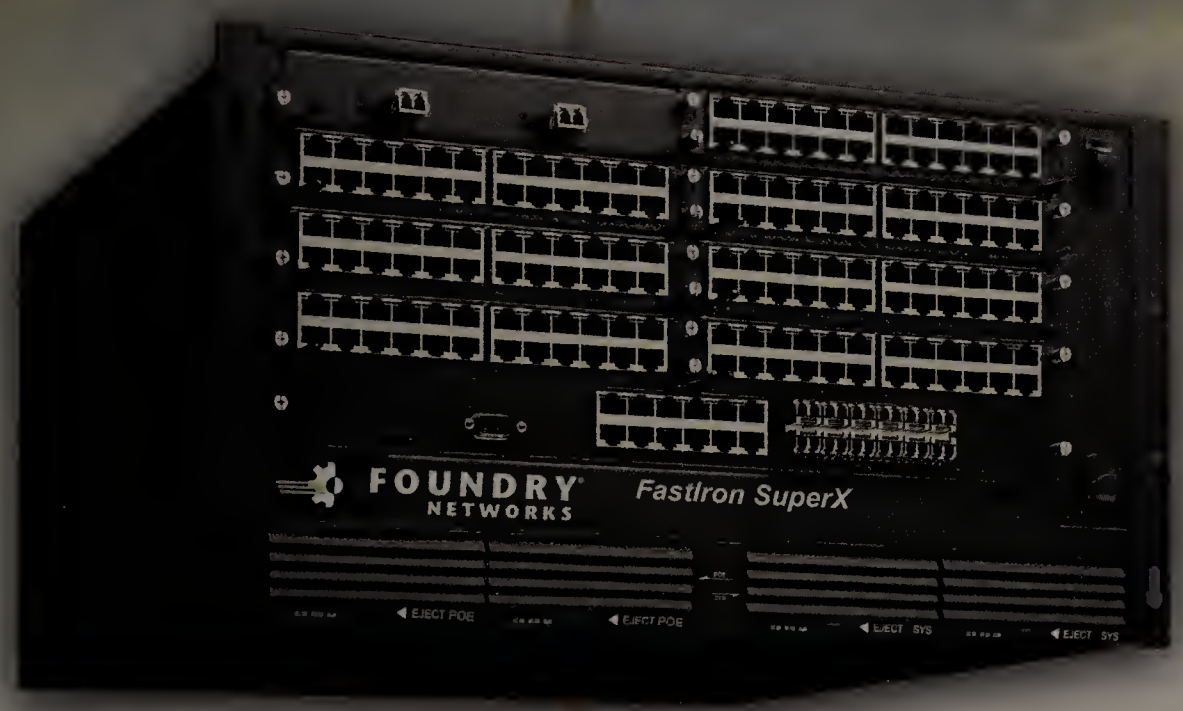
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More from the interview

Head online to hear the audio from the entire conversation with BMC CTO Tom Bishop.

DocFinder: 9727

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SERVICE PROVIDERS

Broadwing beefs up managed security

BY JIM DUFFY

Broadwing this week plans to extend its new managed security portfolio with a service designed to mitigate viruses and spam.

The services are premises- and network-based, and are targeted at sites ranging from a branch office to a large headquarters location.

Last week, Broadwing unveiled a premises-based service designed to provide firewall management, intrusion detection and prevention, and enterprise vulnerability management. This week, the company is expected to roll out its network-based managed spam and virus protection services, which are intended to monitor and filter e-mail content for spam and virus, and then "scrub" those messages before delivery or redirect them to an e-mail quarantine.

This service is based on technology from MessageLabs.

The Broadwing spam and virus service is a supplement to a customer's e-mail server. The customer retains ownership and control of the e-mail server, while messages coming in through the Broadwing network are scrutinized and scrubbed.

The anti-virus service combines MessageLabs' proprietary Skeptic predictive technology with multiple commercial scanners to identify and stop existing and previously unknown threats. Skeptic uses artificial intelligence and learning from a knowledgebase of e-mail security threats to identify viruses, spam and pornography without the need for time-delayed updates.

The Broadwing virus service is backed by a service-level agreement (SLA) guaranteeing that no e-mail viruses or malware will reach the corporate network.

For spam, Broadwing offers no SLA guarantees even though MessageLabs touts a guaranteed capture rate of at least 95% and the assurance of a false positive commitment of 0.0004%. Broadwing says it is evaluating which spam metrics to enforce.

The service incorporates textual scanning, lexical analysis and attachment controls to identify and control confidential, malicious or inappropriate content in inbound and outbound e-mail. The service also uses image-composition analysis to identify inappropriate images.

The premises-based service offers the entire suite of Getronics' managed security services, including strong authentication, intrusion detection and prevention, identity theft prevention, security reporting and vulnerability assessment. Getronics is a $3.6 billion IT services company.

Broadwing intends to bundle Getronics' security services with its telecom services to help customers secure information assets and enhance business protection and continuity. The carrier offers guarantees of 15 minutes for incident notification and patches, and one hour for change controls.

Pricing for this service is based on the number of managed appliances and the level of security monitoring required.

Broadwing also is developing a guaranteed distributed denial of service (DoS) mitigation service using PeakFlow equipment from Arbor Networks. The guarantees will offer SLAs on distributed DoS detection and mitigation.

Broadwing joins a growing roster of telecom carriers entering the managed security service market, including Verizon and SBC. The worldwide market for such services is expected to grow to about $4 billion in 2011 from $925 million in 2004, according to Frost and Sullivan. ■

The drivers

Managed security is in demand because IT staffs need to deliver new applications while wrestling with:

- Constrained budgets.
- Complex existing infrastructures.
- Regulatory compliance (such as Health Insurance Portability and Accountability Act, Sarbanes-Oxley Act).
- Constantly changing technology.
- Increased security threats.

Certain features enable managed service providers to do the job better and/or more cost effectively:

- Ability to hire security expertise (and leverage across customer base).
- Ability to see trends emerge across a wide customer base.
- Ability to defend certain threats better from within the network.

SOURCE BROADWING

Short Takes

■ Like Cingular and SBC before it, **BellSouth** has selected Lucent to provide it with an IP Multimedia Subsystem infrastructure to support residential VoIP in BellSouth's nine-state region. Under the multiyear agreement, Lucent will help build out the system that will enable VoIP services to consumers over BellSouth FastAccess DSL Internet service. Lucent Worldwide Services will provide end to end multivendor network integration services, including network and security design, installation and engineering, and program management.

EYE ON THE CARRIER
Johna Till Johnson



Taxing telecommuting?

As noted in previous columns, the number of "virtual workers" is rising dramatically. Virtual workers are those whose supervisor and/or peers are situated in a different place. We've documented an 800% increase in the number of virtual workers over the past five years — for very tangible reasons.

Companies that engage virtual workers can save millions of dollars on facilities costs by locating employees in less expensive suburban areas rather than high-cost metropolitan areas, and personnel by reducing the need to replace or move workers. And they see greater organizational agility — the much-coveted ability to respond quickly and effectively to changing business conditions.

Unfortunately, when it comes to enabling virtual workers, the courts are in the Dark Ages. In particular, the courts seem determined to make things harder, not easier, for one class of virtual workers: telecommuters. The U.S. Supreme Court recently decided not to hear an appeal by a Tennessee telecommuter who was charged New York state income taxes. A New York state appeals court ruled that the state had the right to tax 100% of an employee's income derived from New York sources, even if the employee did not reside in New York and spent less than 25% of his time in that state.

The effect is to potentially increase the tax burden of telecommuters whose employers are based in states with higher income taxes, thus making telecommuting a less-attractive option to employees and making it harder for employers to recruit such employees. For example, companies creating "virtual contact centers" leveraging VoIP to enable contact center workers to work from home may find it more challenging to build out such centers. Corporations aren't the only ones who lose — employees who may be considering telecommuting as a way to save energy costs and improve work-life balance now have to weigh the potential effect of a tax increase.

This is nuts! Just when companies ought to be striving to make telecommuting more attractive — not less — to their employees, the courts are trying to throw on the brakes. So what can forward-looking companies and their employees do?

IT executives should review their telecommuting policies in light of potential employee tax liability. It's a good idea to engage the legal and human resources departments to ensure you're fully informed. One stopgap workaround is to certify that employees who work at home are doing so for the company's benefit, as employees who work at home for their employers' benefits may be exempt from tax increases.

A more structural solution is to encourage Congress to enact the Telecommuter Tax Fairness Act of 2005, which modifies the tax code to address precisely this issue. The act is currently in committee and has not yet been voted on; its sponsors include a bipartisan roster of senators and representatives.

And ask your legislators to support the Telework Tax Incentive Bill proposed by Sen. Rick Santorum (R-Pa.), which would provide a $500 tax credit for teleworkers.

Johnson is president and chief research officer at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

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TECHNOLOGY UPDATE

AN INSIDE LOOK AT TECHNOLOGIES AND STANDARDS

Cognitive radio enhances WLANs

BY NESTOR FESAS AND BOB MAYER

The explosive growth of wireless technologies has created managerial challenges for those who oversee wireless networks. With wireless intrusion threatening security and radio frequency interference impeding performance, IT managers need an up-to-date, detailed understanding of the RF environment to make informed decisions about how to solve these problems.

Cognitive radio technology enables a radio device and its antenna to sense its RF environment and adapt its spectrum use as needed to avoid interference. Integrated software and silicon solutions enable cognitive radio to be built into enterprise-class wireless LAN (WLAN) access points to boost security and optimize performance. Access points with this feature are expected to be available next year.

Wireless intrusion occurs when unauthorized WLAN users gain access to a secured network. Causes include hackers creating ad hoc networks with WLAN clients or a rogue access point connected to a wired network without proper security levels. In either case, the keys to prevention are quick identification, containment and defensive action.

The first step in preventing wireless intrusion is identifying the intrusion point. Because WLANs are fixed to a specific WLAN channel during operation, they cannot simultaneously detect intrusion points on other WLAN channels. Relying on a single-radio access point to provide access and security is insufficient. Network managers must be able to monitor the full WLAN frequency range to be able to reliably detect and identify intrusion points.

Cognitive radio for WLANs provides a means to observe the RF environment in the 2.4-GHz and 5-GHz frequency bands within which IEEE 802.11 WLANs operate without disrupting normal wireless VoIP and data traffic. Continuous scanning of both bands for 802.11 and non-802.11 devices allows for timely detection of intruders.

With detailed information from multiple cognitive radios within a WLAN, administrators can take preventive action.

Cognitive radio can detect non-802.11 devices. This is important because interference, regardless of source, lowers effective data throughput and overall network performance. IEEE 802.11-based WLANs operate within the unlicensed radio spectrums around 2.4GHz (802.11b and 802.11g) and 5GHz (802.11a). Other wireless connectivity standards, such as Bluetooth and HomeRF, operate in the same unlicensed radio spectrums. Microwave ovens, cordless phones and industrial equipment can generate noise in these bands.

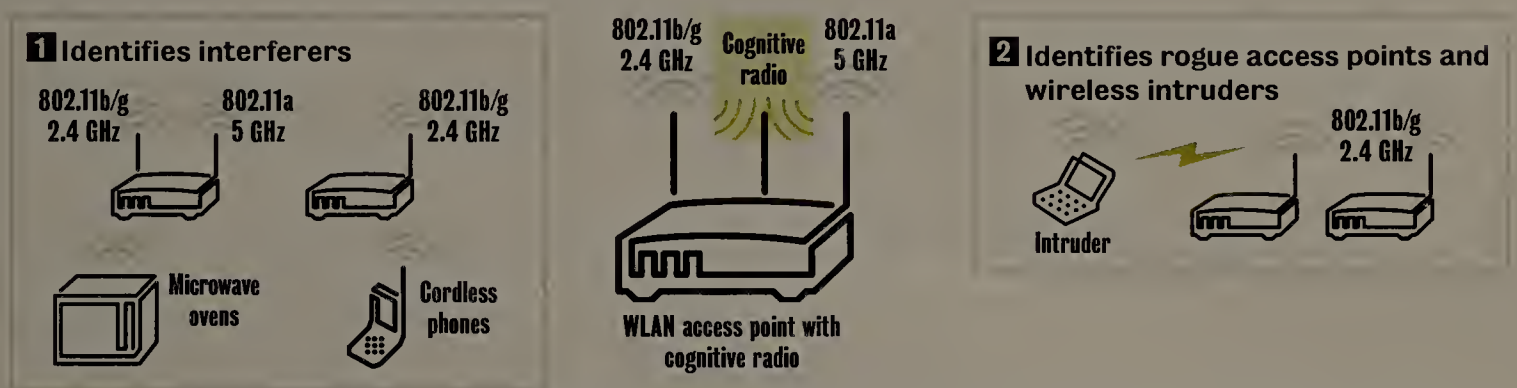
This technology allows a network to detect, identify and avoid these noise sources. Proactive behavior allows a network to be established on clearer channels during initial deployment. Ongoing monitoring allows network administrators to take rapid corrective action against RF noise. This affords the optimal network performance that WLAN users expect.

Integrated software and silicon solutions enable access points to be developed to provide simultaneous WLAN access in the 2.4-GHz and 5-GHz bands while providing integrated cognitive radio functionality that ensures security and performance for enterprise wireless networks.

Fesas is vice president of systems engineering, and Mayer is vice president of marketing for Bandspeed. They can be reached at nfesas@bandspeed.com and bmayer@bandspeed.com.

HOW IT WORKS: Cognitive radio for WLANs

Implemented in the access point, cognitive radio continually scans both wireless LAN frequency bands, providing a comprehensive, up-to-date understanding of the RF environment.



1 Upon initial deployment of the access point, the cognitive radio performs a full scan of the RF environment detecting both 802.11 and non-802.11 interference. The access point selects the WLAN channels with the least interference to maximize performance.

2 Continual scanning of all WLAN access channels in both frequency bands enables the system to identify rogue access points and wireless intruders so policy-based action may be taken quickly.

Ask Dr. Internet

By Steve Blass

I've worked with some basic Web tools and have experimented with Resource Description Framework and want to build a metadata repository to manage a collection of Web-based and physical resources. Is there a reasonably easy, open source metadata repository software we could try?

Try Repository in a Box (http://icl.cs.utk.edu), which runs under Linux and Windows versions of Apache Tomcat using MySQL for data storage. It provides a full-featured repository management system that automatically publishes a browser-capable and searchable catalog. Repository in a Box uses the Basic Interoperability Data Model IEEE standard for encoding metadata but does not publish RDF data directly.

The Fedora (not to be confused with Red Hat Fedora) general-purpose repository system developed jointly by Cornell University Information Science and the University of Virginia Library provides open source repository software and related services to serve as the foundation for many types of information management systems. Fedora is available from www.fedora.info and includes the McKoi Java database in the distribution, so it can be installed and used without a stand-alone SQL database implementation. While Fedora is based on Web service protocols and can be used to publish RDF data readable by tools such as the PiggyBank semantic browser plug-in for Firefox, Repository in a Box is slightly easier to install and can be used right away.

Blass is a network architect at Change@Work in Houston. He can be reached at dr.internet@changeatwork.com.



GEARHEAD
INSIDE THE NETWORK MACHINE

Mark Gibbs

Fun with an online photo gallery

It was a simple enough requirement: We wanted to put photographs of our son's football games online so parents and supporters of the team could buy prints, with the profits going into the team's coffers.

The constraints were that the system would have to look good and be easy to use when implemented, work on most people's computers and be easy to manage. This last issue was crucial because as we have, after weeding out the duds, around 150 photos per game (ah, the wonder of digital cameras) and we're up to our eighth game (we're eight for eight!), management for around 1,000 photos is pretty important.

We decided to look for a Flash-based system because something around 98% of users have Flash installed. We first found a couple that looked promising, but they were too expensive, at more than $200, and not flexible enough.

We finally discovered Darren's $5 Script Archive (www.tufat.com), which has a section devoted to Flash Image Galleries. These scripts are, indeed, $5 each, and they are really pretty good.

We purchased and fooled around with a number of these galleries and decided the one that looked the nicest and had the best interface was Fast Gallery 2.2 (www.networkworld.com, DocFinder: 9730). The gallery has thumbnails that can be different from the picture shown in the main window. You can zoom in and out of the main window and drag the zoomed contents around, and if you click on the main window, the full-resolution picture is loaded into a pop-up. Finally, you can print the picture, disable any or all of the controls and change the colors used as well as the layout — four layout versions are included.

Then we had an "ah-ha" moment, as in "oh rats." The reason for this was that the configuration file for the gallery is an XML file that lists all of the images to be displayed. For each photo the XML data looks like this:

<image thumb="thumbsdir/image2-thumb.jpg">imagedir/image2.jpg</image>
<captiontext>image 2 text</captiontext>
<imageurl popupwidth="460" popupheight="425">bigimagedir/image2.jpg</imageurl>

RealBasic will generate applications that work consistently on Windows, Macintosh and Linux!

You can use the same file for the thumbnail, the large-scaled image and the pop-up image, but remember we have around 1,000 photos to deal with, so this would be a lot of work to create by hand. Obviously, a bit of programming was in order, and this was a fine time to test a product we've been meaning to write about for a few months: RealBasic from Real Software.

RealBasic is an outstanding version of the BASIC language. It consists of an integrated development environment that supports the creation of application user interfaces by dragging and dropping components onto a window. RealBasic includes more than 40 user interface controls, such as buttons, fields, sliders and progress bars.

There also is a code editor, so that you can attach code to events, and there is support for SSL and database server connectors (Oracle, SQL Server, FileMaker Server and MySQL are included).

Most impressively, RealBasic will generate applications that work consistently on Windows, Macintosh and Linux!

We started building an application, and RealBasic is easy to use ... until you get ambitious. We coded a program that allows you to select a subdirectory, builds an array of filenames and then substitutes the filenames in the XML text.

Then we got ambitious. Because dealing with even 200 files takes a while, we added a report on the files to be processed and included a progress bar. Then we tried to add an editor to allow you to set the various display configuration parameters and an image viewer so you could view and omit photos you didn't like. The configuration editor was easy, but we got hung up figuring out how the image-display component works, and we ran out of time.

More next week. In the meantime, code a comment to gearhead@gibbs.com. Oh yeah, don't forget Gibbsblog (www.networkworld.com/community/?q=gibbsblog).



CoolTools

Quick takes on high-tech toys. **Keith Shaw**

The scoop: DS360 CD/DVD Shredder, about $120, from Primera Technology

What it is: More than a paper shredder, the DS360 offers a quick and easy way for IT departments to destroy CDs or DVDs that may include outdated yet still sensitive data. In addition to crunching CDs and DVDs, it can tear up credit cards and folded paper. Remains of your destructive efforts end up in a plastic bin that you can then easily dump into a trash bin.

Why it's cool: Watching and hearing a CD or DVD get run through a shredder is fun when you're bored in the office. More seriously, what is cooler than knowing that the data you had been storing is now completely safe from the prying eyes of corporate spies and dumpster divers? Even better, the small disc shreds that remain are quite sharp, so you can throw them in the trash to deter anyone looking for secret information. You can see how much fun we had with the shredder at www.networkworld.com/video.

Grade: ★★★★ (out of five)



Primera's DS360 shredder easily turns DVDs and CDs into waste.

The scoop: Z-5450 Digital 5.1 Speaker System, between $350 and $500, from Logitech

What it is: The Z-5450 is a high-end speaker system that includes a left, center, right, subwoofer and two rear speakers, as well as a controller that governs the multiple audio source inputs available. The dual-chamber subwoofer produces 116 watts of power and the satellites produce 119 watts, so you won't have timid sound coming from this system. In addition, the two rear speakers are controlled wirelessly, so you don't have to figure out how to hide the speaker wire for these two components (you just need to place them near a power outlet).

Why it's cool: The wireless rear speakers were cool, and so was the ability to put multiple audio source connections through the system. Similar to displays that accept multiple video source feeds, the Z-5450 now allows for three stereo sources (such as CD player or iPod), as well as systems that support digital optical connections or digital coaxial connections (one coaxial and two optical ports are on the controller). A PlayStation 2 can be connected to the speaker system through a digital optical connection for surround sound in video games.



Logitech's subwoofer screams out 116 watts of power, making this system anything but timid.

The system includes a Dolby Pro Logic II decoder, which gives surround-sound features through a normal stereo connection. I connected my iPod to one of the stereo connections, and then changed to the Dolby II Music option on the controller — suddenly, I was listening to music through the five speakers and subwoofer.

Speaking of the subwoofer, the dual-chamber technology produced some very loud bass and low sounds, so be warned that your wife may yell at you to turn it down should you be playing one of those movies with a lot of explosions and the like.

If you have a flexible home theater set up with multiple video sources, treat yourself to a system that will be able to support multiple audio inputs as well.

Grade: ★★★★★

Shaw can be reached at kshaw@nww.com. Don't forget to check out this year's Cool Yule Tools gift guide, starting on page 62.



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Pedal to the Metal

An exclusive survey reveals that the burgeoning ranks of remote employees working the Web are taking a toll on application performance. Now businesses are battling back with strategies to boost performance and turbocharge productivity.



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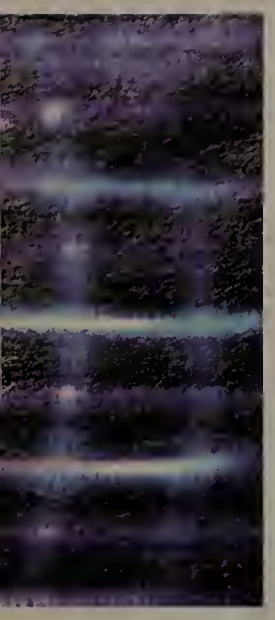
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Pedal to the Metal

BY SANDRA GITTLEN

As Web applications and demands of remote workers slam performance, users fight back to optimize the WAN and reinvigorate productivity.

John Marquart has a goal: to offer more than 1,500 users remote access to a dozen applications running simultaneously over the wide area. His only obstacle is the unpredictable nature of the Internet.

"Our biggest challenge is providing reliable and predictable performance of applications for our users," says Marquart, director of infrastructure at Keystone Foods LLC in Conshohocken, Pa.

It's a challenge shared by many of his peers, as evidenced by a new research study by Research Concepts LLC, Berlin, Mass., titled "Optimizing Application Performance on the WAN." A majority of the 198 IT respondents say they offer access to applications over the WAN, and 30 percent say they have experienced an increase in performance problems with those applications during the past 12 months.

The result of this degradation in performance, according to the study, is a significant (8 out of 10 respondents) loss of individual employee productivity, and 25 percent even saw a decline in revenue-producing activities. This has left them searching for alternatives to improve the wide-area performance of their critical applications.

Marquart knows this firsthand. Initial attempts at providing WAN application access were difficult. He supports remote access from 30 sites that each have full T-1 access. Users can access business-critical applications such as enterprise resource planning (ERP), Oracle financial databases, and voice over IP (VoIP). "Every month, we add another couple of applications to the wide-area network," he says.

Early on, Marquart experienced problems. As more applications were loaded onto the network, they began to fight for bandwidth, and users started to notice. Web forms were

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For example, F5's WANJet™ and WebAccelerator™ product lines specifically address WAN optimization and application acceleration challenges. WANJet accelerates file transfers, email, client/server applications, data replication, and other functions, resulting in predictable, fast performance for all WAN users.

Getting the most out of bandwidth

"As one of the largest retirement plan record keepers in the nation … with a growing participant base that already exceeds 9 million, we needed a solution that could ensure we were getting the most out of our existing bandwidth while still providing full encryption," says Barry Strasnick, CIO of CitiStreet, a global benefits delivery firm in North Quincy, Mass. "WANJet was the only solution that combined the WAN and application technologies we needed to ensure the absolute highest level of performance over the WAN."

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"The WebAccelerator was chosen to be part of our reengineering efforts because it was able to meet and exceed all our performance requirements," notes Jay Hunter, IT project manager for London-based British Land Co.

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slow to download, causing frustration and lost productivity. Marquart attempted to alleviate the problem by boosting capacity. "We quickly realized that buying more bandwidth doesn't always help, and for us, it wasn't a cost issue. It doesn't fix performance issues. The hungriest applications were still starving the others," he says.

Finding the right tool

Instead, to offer stable and consistent performance to business-critical applications, Marquart turned to WAN optimization tools that allow him to shape traffic, enforce policies, and set priorities.

These tools, which are available as stand-alone appliances, software, or managed services, let IT managers make better use of the network resources they have to improve application performance over the wide area.

WAN optimization tools feature a variety of techniques, including caching, compression, prioritization, policy enforcement, and offloading server CPU-intensive tasks, such as handling TCP and Secure Sockets Layer (SSL) requests. They can be asymmetric (at one end of the connection) or symmetric (at both ends). They can be managed in-house or outsourced. And they can be single-function or multifunction. The choices are seemingly unlimited.

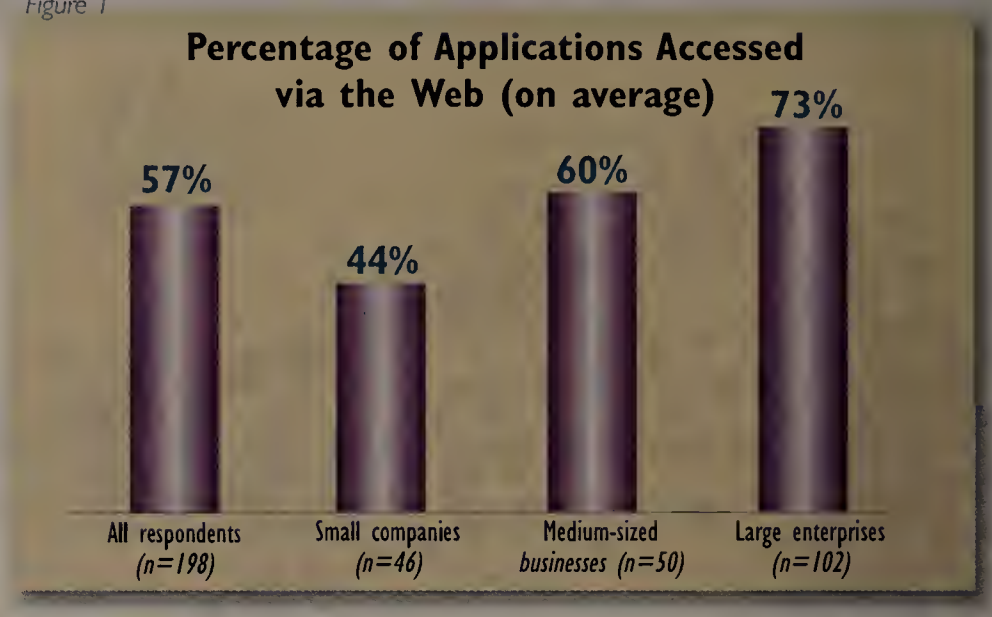
But no matter which type you choose, they all have a common denominator—to help you avoid spending thousands of dollars each month on additional bandwidth capacity.

"Bandwidth is expensive, and no one has a bandwidth budget that's going to keep increasing," says Johna Till Johnson, founder of Nemertes Research in New York City. She says IT managers must find alternatives as the challenges they face in delivering applications over the wide area intensify.

Johnson points to the number of remote users who are accessing applications over the wide area. "Three years ago, 85 percent of workers were outside of headquarters; that number is now at 92 percent," she says.

She says the types of applications they are trying to reach also plays a role in performance degradation. "You've got the convergence of voice and data going out to remote users," she says. Hefty and chatty applications like databases and telephony tools are becoming commonplace over the Web, requiring servers to answer multiple requests over the long haul.

Figure 1



RESEARCH CONCEPTS, OCTOBER 2005

The Research Concepts study shows that enterprises offer, on average, access to 57 percent of their applications over the wide area. But with large enterprises, that number grows to 73 percent, according to the report. (See Figure 1.)

At the same time that demand is growing for applications, IT groups are consolidating their infrastructure resources into centralized data centers for better management, regulatory control, and cost savings. "With consolidation, you're taking whatever server you had in the field and moving it farther away from users," she says. The end result is that traffic now has to travel across greater distances to reach its final destination.

Bringing Order to Chaos

Juniper Networks speeds up application performance and drives business value.

IT managers are between a rock and a hard place. On the one hand, they are scrambling to build out networks to accommodate the rapid global integration of business processes while supporting a burgeoning number of remote workers. But doing so places tremendous pressure on the WAN, slowing some applications to a crawl and dealing productivity—and profits—a heavy blow.

In response, many managers have tried adding WAN bandwidth, which is costly and doesn't specifically address application performance problems. Others have added a plethora of point devices and software at the Web tier to perform server load balancing, Web caching, compression, and many other performance enhancements to offload back-end servers and improve performance. Unfortunately, the result is a mishmash of costly, complex, and often incompatible solutions.

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Ideally what network managers need is a comprehensive solution that solves the current dilemma by accelerating application performance over wide-area links, doubling server capacity, reducing Web page download times by half, cutting data center expenses, and enabling server consolidation to lower overall IT costs.

Integrated platforms light the way

It is not surprising then that these managers are enthusiastically embracing integrated platform-based application acceleration solutions, such as those offered by Juniper Networks Inc., Sunnyvale, Calif. Juniper Networks' WX and DX application acceleration platforms not only eliminate the need for multiple point products, they are also faster and easier to deploy and scale as business demands grow. What's more, these integrated platforms target the two primary issues impacting application performance: the data center, where centralized resources reside; and the WAN, which links branch office, remote, and mobile employees to the applications in the data center and corporate headquarters.

At the Web tier, integrated platforms provide multiple high-transaction processing, server-offload capabilities, and acceleration application performance, thus adding tangible productivity value and reducing costs. In the WAN, these platforms increase available capacity with compression and sequence caching while accelerating TCP and application-specific protocols to minimize the impact of latency on application performance.

Juniper Networks is a leader in providing comprehensive application acceleration and security solutions. Download the free white paper "Accelerating Application Performance across the WAN" at www.juniper.net/dm/aap.

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The final consideration, Johnson says, is that you don't always know what the bandwidth is on the endpoint. Users could be trying to access information over T-3 lines or 56K dial-up lines, she says. So rather than focusing on getting bigger bandwidth, she recommends "figuring out how to better utilize what you have."

"You have to decide what problem you're trying to solve. Is there too much latency? Is there not enough bandwidth? Where is the slowdown happening?" she says. "You have to solve the right problem with the right technology. Is your problem that your servers don't have capacity?"

Identifying the bottlenecks

Scott Crawford, senior analyst at Enterprise Management Associates in Boulder, Colo., agrees, and says this type of analysis requires visibility into the network.

Before committing to a WAN optimization tool or service, he says IT managers should assess their network resources and see where bottlenecks are occurring.

"You can't manage what you can't measure," he says. Crawford recommends not only using tools that measure wide-area network performance, but also those that map the end-user experience with applications. "Be sure to measure at different geographic points around the world," he says.

Such tools offer tremendous insight, he says, adding that IT managers should consider the core function of their application. "For instance, if you are experiencing a large number of SSL connections for a banking Web site, then you know you need SSL offload help," he says.

For Bernie Lubitz, the bottleneck was in the last mile. "Our problem was with remote users—whether at home or in small offices," he says.

Figure 2

How IT Becomes Aware of Application Degradation, by Company Size

	All respondents	Small	Medium	Large
Employee complaints	82%	81%	89%	79%
Help desk calls alert us to problem	60%	30%	62%	74%
We continuously monitor network performance	55%	35%	62%	60%
Management complaints	39%	41%	38%	39%
We continuously monitor application performance	38%	41%	35%	39%
Based on our experience we were anticipating a problem and were checking performance	23%	22%	22%	25%
We have not experienced any application slowdowns or problems in the past 12 months	5%	3%	5%	5%
Base	154	37	37	80

(Multiple Responses)

RESEARCH CONCEPTS, OCTOBER 2005

Lubitz is director of telecommunication technology at Martin Memorial Health Systems Inc. in Stuart, Fla. He supports eight applications for a large network of healthcare providers, including hospitals, doctors' offices, and physicians working from home.

Those applications include "thick" programs like the core Health Information System (HIS), which he calls "host-based and chatty" and a picture archiving communications system that allows healthcare providers to access radiology images. "These applications chew up a lot of bandwidth, but we can't afford to expend a lot of dollars on bandwidth to home workers or small offices," he says.

He also can't use the typical WAN optimization tools that feature caching and compression because the HIS application is modular and the picture system sometimes serves up real-time images.

Instead, Lubitz uses hardware-based IPSec and SSL virtual private networks (VPNs) to centralize traffic management. It's a common approach,

Mining Success One Bit at a Time

Packeteer helps Arch Coal speed up applications with existing WAN infrastructure.

It operates in one of the world's oldest industries, but Arch Coal relies on high-speed, complex applications harnessing real-time data to push profit and growth in its far-flung operations. But when rapid growth of the nation's second largest coal producer resulted in increased data traffic between mines and front-office operations, application performance began to degrade.

First the IT staff at St. Louis, Mo.-based Arch Coal attacked the problem with a "brute force" solution: They bought more bandwidth at one location. But the bandwidth was quickly consumed by increased Web traffic, and offered no improvement to business-critical, lower-volume applications. Using network monitoring tools didn't help either, as they were useless in determining the sources of unacceptable bandwidth consumption.

According to Don Staten, Arch Coal's manager of technology support, "We needed a solution that would give us the right bandwidth for the right applications with the links we already had in place."

That solution turned out to be PacketShaper appliances from Packeteer Inc., Cupertino, Calif. PacketShapers deliver mission-critical solutions by controlling bandwidth allocation on each WAN link and prioritizing core applications requiring real-time data exchanges.

Great results, big savings

Specifically, Arch Coal installed a PacketShaper 6500 at its corporate office to prioritize the outbound WAN traffic for core financial and operational applications. To further boost application performance and optimize WAN bandwidth, the company deployed more PacketShapers at its remote mining locations.



The results were striking. PacketShapers helped increase network bandwidth by 200 percent for critical applications, markedly improving business performance as a direct result. Network capacity has been increased up to a factor of seven times, all with utilizing the existing WAN infrastructure.

And there are significant cost savings. "We estimate we're saving a minimum of $10,000 per month because the PacketShaper system helps us use our existing bandwidth so much more efficiently," says Staten. "Thanks to Packeteer, we can say with confidence that application performance is meeting our users' needs across the network."

For more information, visit www.packeteer.com.

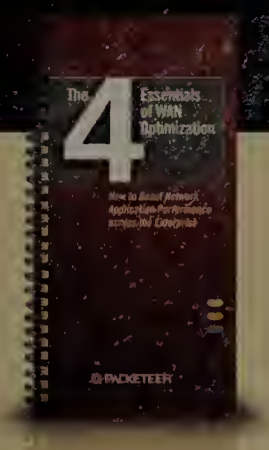


GIVE KEY WAN APPLICATIONS THE PRIORITY THEY DESERVE.

Bandwidth, compression, or probes simply won't solve your WAN performance problems. Only Packeteer enables you to protect vital applications, pace greedy traffic, limit recreational usage, and block malicious traffic—so all your locations will run as smoothly as HQ. Respond now for our free handbook, *The 4 Essentials of WAN Optimization*, and learn how to optimize any WAN to ensure maximum performance for critical applications such as SAP, Oracle, Citrix, VoIP, Email, and hundreds more. **Go to www.packeteer.com/four.**



Packeteer — the WAN optimization leader with over 7,000 customers in 50+ countries extends WAN application control to the edge of your network.



FREE HANDBOOK

Discover the key components for ultimate WAN performance, while eliminating the root causes of lethargic WAN applications. Download your free copy now at **www.packeteer.com/four.**

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PACKETEER®

according to the Research Concepts report. In fact, 62 percent of respondents already have implemented VPNs to address application performance problems, and 14 percent plan to roll them out in the next 12 months. (See Figure 4.) Lubitz understands why they are popular.

"Once you establish that tunnel, you nail that pipe up and you've got guaranteed bandwidth end-to-end," he says. His IT group uses the prioritization functions within the VPNs to give more bandwidth to the imaging and HIS programs, and throttle back usage of the email and other low-latency applications. "It's not like being on the LAN, but it's adequate," he says.

Figure 3

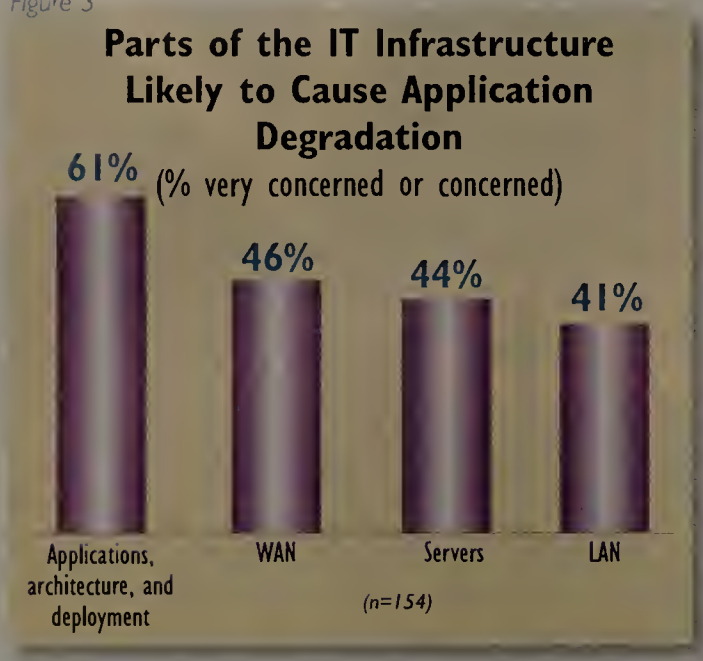


Figure 4

Tools Pressed into Service to Combat Application Slowdowns

	Already implemented	Will implement in 12 months	Would consider outsourcing	No usage plans	Not sure
VPNs	62%	14%	3%	14%	6%
Server consolidation	48%	19%	7%	17%	9%
WAN optimization devices	29%	21%	11%	26%	13%
Remote office centralization tools	25%	20%	10%	32%	14%
Layer 4 switches	23%	15%	10%	33%	20%
Content switch/application front end	23%	17%	8%	35%	16%
Composite applications	13%	8%	8%	42%	28%
Layer 7 switch	9%	16%	9%	42%	24%

(n=151)

A caching solution to traffic jam

While Lubitz shies away from caching, Arthur Brant relies heavily on that method of WAN optimization.

Brant, who is manager for network services at Abilene Christian University in Abilene, Texas, says caching fits perfectly into his environment and saves him from having to add more bandwidth and server capacity.

"The issue we ran into was the overall demand for applications was so high, but the funding to get additional bandwidth was not available—that's what prompted us to look at optimization," he says. Brant adds that "the minute we'd get a bigger pipe, it'd be filled—you'd just be throwing money at it nonstop."

More than 5,000 users—students, faculty, and staff—use 30M-bit/sec connections to access a mix of applications, including courseware systems, ERP, and Web portals. "We're a one-network site trying to provide this access. Our demand exceeds our available bandwidth," he says.

The Web traffic alone was causing Brant headaches. And he's not alone. According to the Research Concepts study, 73 percent of respondents say Web traffic is a major to moderate cause of their application problems. The second greatest problem is streaming media, the report finds. (See Figure 5.)

RESEARCH CONCEPTS, OCTOBER 2005

RESEARCH CONCEPTS, OCTOBER 2005

Peak Performance

Law firm gives productivity a major boost with Riverbed Steelhead appliances.

To continue its intense focus on client service, the 200-plus attorney Allen Matkins law firm, based in Irvine, Calif., sought to better enable interoffice collaboration among attorney practice groups distributed in distant offices.

Practice groups consist of industry experts who share vital documents and client information via the company's wide-area network (WAN). With a growing set of demands being placed on the WAN through these virtual teams, bandwidth and latency restrictions were beginning to limit attorneys' ability to provide the firm's high level of client service. Downloading litigation case files could take up to 20 minutes, and uploading changes took just as long, resulting in nonbillable attorney hours.

RIVERBED™

The firm's IT team considered adding bandwidth. But estimated costs of doing so would top $340,000 over the first two years alone, and would not address latency on the WAN. Another alternative considered was deploying local instances of key applications at each location. But steep upfront costs, potential issues with data freshness, and ongoing management challenges made this solution impractical as well.

The Riverbed verdict: superb results

Instead, the director of technology, Frank Gillman, and his team decided to deploy Steelhead® appliances from Riverbed® across the firm. As a result, litigation case files can now be downloaded up to nine times faster than before. Transfers that once took nearly 20 minutes are done in just two minutes—a productivity improvement no increase in bandwidth could have accomplished. Because Steelhead appliances give users faster access to information from any remote office, regardless of the size of the bandwidth connection, Allen Matkins has been able to efficiently consolidate its IT infrastructure by centralizing client data in the corporate data center. And the frustration level among office workers and attorneys is down markedly.

The firm estimates it will save nearly $1 million annually in productivity gains, the result of supercharged application performance over the WAN with Riverbed Steelhead appliances. And the cost of implementing the Steelhead appliances turned out to be 70 percent less than a bandwidth upgrade, while operating costs are an astonishing 88 percent less.

For more information on what Steelhead appliances from San Francisco-based Riverbed Technology Inc. can do to accelerate your applications, visit www.riverbed.com.



This is what we have in mind for your WAN.

Only Riverbed makes your remote applications feel local.

Most applications and protocols were designed to run locally. Over a WAN, they grind to a halt. That's why Riverbed developed a solution built on radically new, patent-pending technology that actually delivers LAN-like performance across your WAN. Even for chatty applications that can break down across the most robust networks.

Riverbed's proven solution allows your enterprise to consolidate IT infrastructure at the data center, optimize your bandwidth usage, and still deliver applications and data over your WAN – at speeds that make remote data feel local.

Find out how Riverbed can accelerate your business. Visit **www.riverbed.com/info/nw** to download your copy of the analyst white paper "Wide Area Data Services" today. Or call us at **1-87-RIVERBED** to get started right away.



RIVERBED

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To reduce the amount of connections out to the Internet—a task that was taxing the network—Brant uses a caching server that stores the most frequently requested pages. He uses the tools in the server to control the freshness rating, setting it at 97 percent. He says even the 3 percent of caching the server performs dramatically reduces the strain on the network.

"There's a fine line between people needing to get to files and those just accessing Web pages. Typically, if they're doing Web browsing the freshness doesn't have to be that high, but if they're downloading the latest updates and drivers it does," he says.

Like Lubitz, Brant also uses application prioritization—mainly to control the affect peer-to-peer file sharing has on the network. "As a university, we experience a lot of music file sharing, but we're opposed to totally blocking it. Instead, we limit it to under a megabyte of traffic," he says.

The prioritization tools let Brant set priority by time of day as well, optimizing how the bandwidth is apportioned. "From 8 a.m. to 5 p.m., the university is in business mode, so traffic from the student dorms gets lower priority during that time. After the faculty and operations go home, then priority can be jacked up for students to have more available bandwidth," he says.

Keystone Foods' Marquart is also a fan of bandwidth portioning. He uses traffic-shaping software at each remote site to create centralized classes of applications. Like Brant, he doesn't want to ban use of file sharing or media applications. "We don't want to stop it, but we also don't want it to suck up an entire T-1 connection," he says. Marquart says he sets priority, giving more important applications like VoIP the highest ranking.

While he's had "fantastic success" with the WAN optimization tools he's employed so far, he sees

Checklist for accelerating applications and optimizing WAN resources:

- ✔**Resist the urge to throw more bandwidth at the problem. It may be money wasted.**
- ✔**Gain visibility into your network with measurement tools for both the links and the end-user experience.**
- ✔**Determine where your bottlenecks are and address them one at a time. For instance, if you're stalling out with SSL requests, implement SSL offload tools. If peer-to-peer file sharing is soaking up your bandwidth, use prioritization and policy tools to throttle back the bandwidth allotted to these applications. If you are doing large file transfers, test-drive compression offerings.**
- ✔**Before committing to any one product, try it out in your network with your applications and your users. Benchmarks that vendors show you may not apply to your network environment.**
- ✔**Don't forget about security. Make sure that your acceleration and optimization tools provide a safe environment for users to access network resources.**
- ✔**Consider outsourcing if you do not control the endpoints—it might save you time and money in management and equipment costs.**

Optimize Your Business by Optimizing Your Applications

Radware delivers "app-smart" networking for better business-IT alignment.

In today's connected world, business relies on networked and Web-enabled applications to drive productivity and profits. Companies can maximize their potential for business growth and get the greatest value from investments in IT and people by ensuring the availability, performance, and security of their mission-critical networked applications.

Business happens anywhere, anytime, at the speed of opportunity when you have an "application-smart" network that can adapt to the needs of your organization. When you empower employees with guaranteed application access, fast user response times, safeguarded information, and reduced management complexity, the results are obvious: increased productivity, infrastructure cost savings, and improved collaboration with partners, suppliers, and customers.

Radware APSolute's integrated approach to application delivery

To get networked applications to perform to their fullest productive potential, businesses need an integrated application delivery solution designed from the ground up to make networks responsive to dynamic application and business needs. APSolute from Radware is a cohesive product family that optimizes application delivery by using unprecedented granular application intelligence to tune network behavior, end-to-end.

radware
availability | performance | security

Radware APSolute intelligently integrates availability, performance, and security capabilities to solve the problems of traffic overloads, transaction failures, database logjams, server bottlenecks, security breaches, scaling costs, and network management headaches—all with one unified solution. APSolute makes your network smart and your applications reliable, fast, secure, and scalable everywhere across the LAN, WAN, and Internet.

Whether you are supporting a diverse, distributed user constituency with email, supply chain management, ERP, terminal services, financial, ecommerce, or any other Web-based, networked application, Radware APSolute provides a unified application delivery architecture capable of optimizing the operation of any core business application over your entire network. That means extending the reach of your mission-critical applications and guaranteeing the best user experience without compromising security, all while reducing operating and growth costs.

For more information on what Radware APSolute can do to give productivity a real boost at your company, visit www.radware.com.





On a wide area network, distance is the enemy. The farther data must travel, the less efficiently your WAN transports it. This network "latency" can diminish application response or worse, some data packets may not arrive at all.

You don't have to add more bandwidth. Often the problem is due to distance or chatty applications, and additional bandwidth doesn't directly take on the problem of inefficiency.

Orbital Data's TotalTransport accelerates remote office applications and dramatically increases data throughput without having to add more bandwidth or change how you use your network today.

Orbital|Data™

www.orbitaldata.com
1900 South Norfolk Street
San Mateo, California 94403
1.800.280.3406 toll free

Productivity Engine

Orbital Data's application acceleration solutions drive bottom-line results.

Like most companies, Peelle Technologies runs a variety of Windows-based applications but was experiencing poor application performance at its remote locations. After evaluating different solutions, including buying more bandwidth, the Campbell, Calif.-based management services firm deployed the Orbital™ 6000 series application acceleration solution from Orbital Data™.

Since then, the company has "been able to improve application performance without dedicating limited IT staff resources to managing the solution," says Dayn Pefferle, CEO of Peelle. "The increased productivity has had a significant impact on our bottom line."

Engineered to maximize return on investment (ROI) and minimize total cost of ownership (TCO), the Orbital 6000 family is designed to supercharge business-critical applications over WANs; it is capable of increasing data throughput up to 200 times. The result is a tangible increase in productivity for users of these applications, with predictable bottom-line results like those experienced at Peelle Technologies.

Panacea for remote offices

The Orbital 6000 family includes the Orbital 6800 for data center deployments and the Orbital 6500 for remote and branch offices. This new platform incorporates the latest release of Orbital Data's TotalTransport with AutoOptimizer™ software. This solution delivers flow control, compression, and Common Internet File System (CIFS) acceleration capabilities for added WAN throughput and speedier application response times. The AutoOptimizer capability ensures that the correct set of techniques is applied to network traffic, based on the characteristics of the application, the WAN link, and the protocols used.

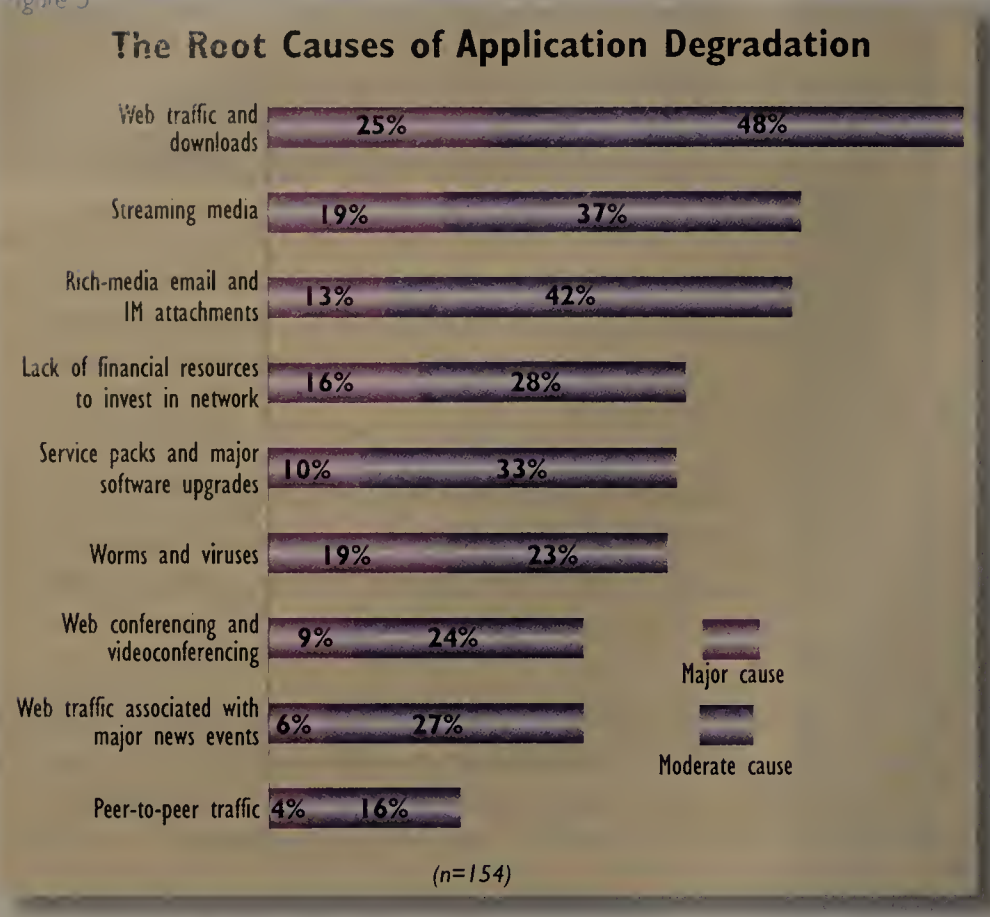
CIFS acceleration targets the ever-present Windows-based applications. TotalTransport for CIFS resolves the most troublesome application problems by delivering marked performance enhancements to remote users: It speeds up routine file operations and directory browsing.

Orbital|Data™

"While the proliferation of WAN optimization and application acceleration products has provided many different approaches to solving performance issues, all of them have a high 'pain level' in the time and resources that enterprises must dedicate to their ongoing management," says Dick Pierce, CEO of Orbital Data Corp., San Mateo, Calif. "The Orbital 6000 series solves the problem of simply 'making WANs just work' and providing predictable application performance across far-flung networks."

For more information on what the Orbital Data solutions can do to drive productivity and profits for your company, visit www.orbitaldata.com.

Figure 5



trouble brewing ahead and wants to ward it off.

"We're at the cusp now of having to add more bandwidth, which can cost as much as $1,000 for a T-1 per month per site," he says.

To avoid that, he plans to eventually add compression to his network to deal with noncritical applications like email, IMAP, and Web browsing that can be a drain on network resources. "These tools are a one-time cost of $3,000 to $6,000—that's a pretty good return on investment," he says.

Keeping end users happy

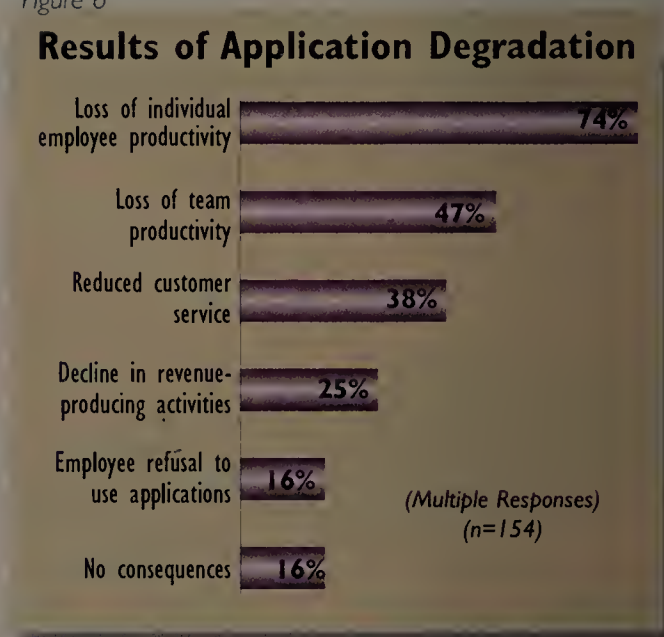
For many IT managers, the main benefit of better application performance is to keep end users—employees, clients, and customers—happy. The Research Concepts survey reveals that problems with application degradation led 38 percent of respondents to experience reduced customer service. (See Figure 6.)

"People want LAN-like performance. You don't want access to the information to be so different [from] their normal way of getting to it, or too slow to be dealt with," says Rubin Bennett, owner of RB Technologies, an implementation firm in East Montpelier, Vt.

From pages not loading in a timely fashion to online Web sessions timing out, performance problems can take their toll on your business, he warns. "There's a very direct link between how your employees work and how well they can service your customers. If your employees are frustrated with the systems, they'll say to customers, 'Our systems are down again,' and you don't want that," he says. ■

Gittlen is a freelance technology editor in Northboro, Mass.

Figure 6



RESEARCH CONCEPTS, OCTOBER 2005

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Supercharging Application Performance

Q&A with Warren Ross, who runs product marketing for Application Performance Services at Akamai®.

Akamai
The Trusted Choice For Online Business™

Q: What are the key challenges network managers face in optimizing the WAN?

A: Enterprises have extended their businesses to customers, suppliers, and others outside the company, using the Internet for transport of business-critical application traffic. Enterprises have learned they cannot improve the performance of the Internet cloud, especially for long-distance traffic. Companies are also at the mercy of TCP/IP, and the nature of how this protocol impacts Internet traffic.

Q: What are they doing to address the challenges?

A: They begin with purchasing additional bandwidth, but this often doesn't help because bandwidth is rarely the problem. So then they begin looking at their servers, which helps only if servers are the problem. We have found the problem is usually the Internet cloud itself.

Q: Do budget restrictions impede addressing these challenges?

A: When problems originate with mission-critical applications, money will be found to fix them. But with IT budgets facing constant and increasing scrutiny, all solutions must fix a business problem, fix an IT issue, and reduce TCO—all at the same time. This can force enterprises to live with some poorly performing applications due to budget restrictions, especially for long-distance traffic. Akamai has built solutions to improve business performance by improving the performance of applications and lowering TCO.

Q: What do third parties offer to resolve these network challenges?

A: One good example is Cathay Pacific, a customer that we helped improve site performance, support more travel agents, and support peak traffic without more infrastructure. In general, Akamai improves the performance of traffic customers place on the Internet by doing what the customer cannot—namely routing traffic around Internet bottlenecks to reduce the response time of applications, performing TCP optimization to increase performance of traffic on the Internet, and dynamically mapping end users to the best-performing edge server on the Akamai network to radically improve performance. In sum, Akamai's approach to critical performance issues is an application acceleration managed services approach that facilitates expansion of the business with lower TCO.

Remote Application Performance directly impacts your business.

Does your infrastructure deliver?

Akamai
The Trusted Choice for Online Business

CASE STUDY

CATHAY PACIFIC

Cathay Pacific Airways is an award-winning, international airline based in Hong Kong that offers scheduled passenger and cargo services to destinations around the world, and carries almost one million passengers every month.

The Challenge: Global Application Performance

In Hong Kong, our site downloaded quickly, but outside of Hong Kong, performance degraded quite quickly," explains Scott Ohman, Manager E-Business Commercial for Cathay Pacific. The airline knew that slow site performance would hinder future business growth. "We realized that building out our infrastructure to address site performance would be astronomically expensive. Besides that, it ultimately wouldn't help us overcome our global performance issues," explains Ohman.

Why Akamai

Accelerate Time to Value

"In the end, the Akamai solution was the clear choice. It came down to three 'Cs'—cost, comfort, and confidence. The cost was reasonable; we were very comfortable with Akamai as a solution provider we could trust; and we were quite confident that Akamai had a proven solution that would be easy to implement," says Ohman.

Improve Global Performance

"Akamai provides us with a complete, cost-effective solution that addresses our requirements for improved performance, massive reach to support our worldwide client base, and an on-demand infrastructure to support varying and unpredictable traffic levels. They are a crucial part of our e-business strategy as our online presence continues to grow," concludes Ohman.

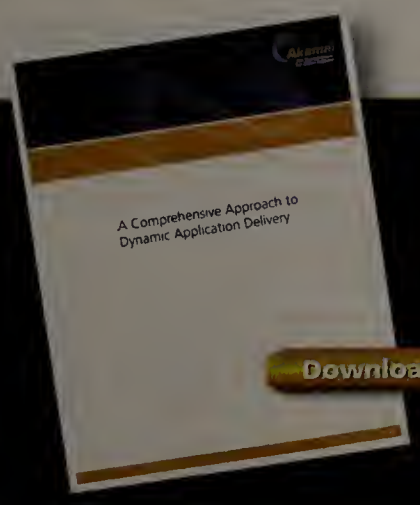


"Altogether, these improvements should lead to more bookings online and proportionally fewer calls to our call center, generating an estimated savings of up to $1,500,000 annually."

—Scott Ohman, Manager E-Business Commercial, Cathay Pacific Airways, Ltd.

The Akamai Impact:

- *100% increase in online bookings*
- *Estimated annual savings of up to $1,500,000*
- *Significant increase in agent extranet adoption*
- *65% increase in traffic without additional infrastructure*
- *65% increase in global site performance*
- *Considerable infrastructure savings per year*
- *Confidence in its online presence its infrastructure*



Grow your business, not your infrastructure.

To learn how Akamai can improve the performance of your dynamic applications visit ***www.akamai.com/appdelivery*** and download the whitepaper:
A Comprehensive Approach to Dynamic Application Delivery

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Having your cake and eating it

Yes, you can have high-performance applications that are also secure.

BY SANDRA GITTLEN

There's a myth in the IT industry that adding security to application access leads to slower performance over the wide area. Authentication requests, encryption and decryption, and tunnel setups and teardowns are all believed to labor traffic delivery.

But some IT managers are hoping that traditional and emerging security tools will actually help them reduce the traffic load on their networks and in turn boost the performance of their applications.

For instance, Arthur Brant, manager for network services at Abilene Christian University in Abilene, Texas, says common software for intrusion prevention and detection, such as Snort, could be used to monitor and detect unwanted traffic on the network.

A drawback for university networks is that they are often the target of denial-of-service and other traffic-flooding attacks. "These attacks across the wide area have the ability to compromise the whole network and its resources," Brant says. In the end, bandwidth, servers, and other performance-affecting resources are chewed up dealing with illegitimate traffic.

"With IDS [intrusion detection system] and other software, we can note what type of traffic is transported through the pipes. If it's no good, then we can pull [the plug] on the infected devices that are spewing network traffic," he says. He predicts that this alone would save a lot of bandwidth capacity. "We can eliminate the inappropriate resource consumption from the network."

Vulnerabilities can be a major performance headache for IT managers. According to a recent survey by Research Concepts, 42 percent of respondents cite worms and viruses as a cause of application problems across their networks. (See Figure 5.)



Scott Crawford, senior analyst at Enterprise Management Associates in Boulder, Colo., says that remembering the vital role that security plays in boosting application performance is critical.

CONTINUED ON PAGE A-18

The Cure for Slow Application Performance

Citrix NetScaler speeds mission-critical applications for leading healthcare provider.

Leading Midwestern healthcare provider ProHealth Care Inc. (PHCI) in Waukesha, Wis., is building an ambitious new intranet that will be used by more than 700 physicians and nearly 5,000 PHCI employees. The network provides access to a wide range of applications critical to running PHCI's business.

So choosing the right vendor—one able to help PHCI sustain high application availability and performance—was vital.

"When a surgeon is waiting for information while in the operating room, you can't say, 'Stand by please. The application is a bit slow now,'" says PHCI network architect William Bailey. "In a business like ours, highly responsive applications and global application availability are mission-critical."

PHCI chose Citrix® NetScaler® application delivery systems from Citrix Systems Inc. because they easily outperformed the other candidates PHCI evaluated for its core application acceleration and load balancing requirements. "The Citrix NetScaler systems clearly performed better than the other candidates in all areas—globally across all four data centers, at the individual server level, and at the application level," Bailey notes.

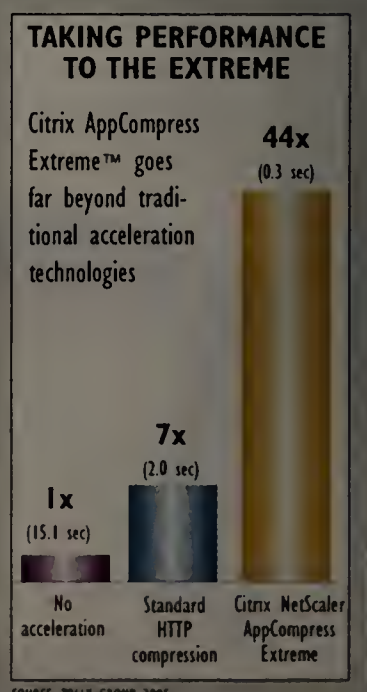
Payoffs clearly evident

With the Citrix NetScaler systems installed, PHCI is now reaping the benefits of its decision.

Bailey estimates that Citrix NetScaler systems have already helped PHCI avoid the cost of additional Web and application server investments to handle important activities now performed by the Citrix NetScaler systems. Also, the company's market-leading acceleration technology has greatly improved overall network performance. "We are reaping a significant performance boost on overall transaction throughput due to the acceleration that the Citrix NetScaler application delivery system provides," he says.

"Citrix NetScaler will definitely have a role in our future growth," Bailey concludes.

For more information, visit www.citrix.com/netscaler.



Citrix NetScaler
makes any application
run up to
15 times faster
for anyone, anywhere.



Every day, leading Global 2000 enterprises, including the five largest e-businesses in the world, rely on Citrix® NetScaler® solutions to dramatically accelerate application performance. All without adding servers, bandwidth, or consultants. Perhaps that's why Citrix NetScaler application delivery systems are rated #1 in customer satisfaction among Layer 4–7 networking vendors. See what Citrix NetScaler can do for you at www.citrix.com/netscaler

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The Skinny on Service Providers

Outsourcers can offer big benefits to IT organizations.

BY SANDRA GITTLEN

Experts say that choosing do-it-yourself WAN optimization methods works best if you know the endpoints accessing your network. If you don't, then outsourcing is your best bet.

"If you're not in a position to put boxes at the remote ends, then you're best off with a service provider," says Johna Till Johnson, founder of Nemertes Research in New York City.

Options such as managed virtual private networks (VPNs) or optimized delivery services abound from a variety of providers, including carriers and third-party vendors. However, a recent Research Concepts study finds that only 17 percent of organizations use an outsourcer for WAN optimization. But 18 percent say they are very interested or interested in using one to ensure availability of applications for remote employees.

IT managers across the board seem to shy away from this type of outsourcing. According to the study findings, the size of the organization is a factor in their concerns. The report finds that 63 percent of large enterprises are worried about giving up control of their network, while 37 percent of small companies worry about the perceived high cost. (See Figure 7.)

Figure 7

Inhibitors to WAN Optimization Outsourcing

	All respondents	Small	Medium	Large
Do not want to give up control	56%	41%	55%	63%
Too expensive/costs associated	26%	37%	33%	18%
Do not think providers will be effective at dealing with issues related to WAN optimization	22%	20%	20%	25%
Not sure	14%	7%	16%	17%
Base	197	46	49	102

(Multiple Responses)

RESEARCH CONCEPTS, OCTOBER 2005

But Johnson says outsourcers offer tremendous benefits for IT organizations. "You'd turn to an outsourcer for all the obvious rea-

CONTINUED ON PAGE A-18

Enable the Network, Power the User

Expand Networks helps organizations simplify their IT infrastructure while delivering superior application performance to distributed business environments. The result: improved user productivity and cost-effective IT management.

It's no secret that the overwhelming majority of workers today are located away from a central office. But no matter where they are working, the common challenge they share is gaining fast, reliable, and secure access to real-time data and to the applications they need. This remote worker phenomenon combined with movement to Web-based applications that were not designed with the wide-area network (WAN) in mind have placed significant stress on the WAN, which often is viewed as a bottleneck and impediment to accessing networked assets.

For distributed organizations like Hitachi Capital, Continental Airlines, Siemens, the U.S. Department of Defense, and the American Red Cross, the answer to the overstressed communications infrastructure is the Accelerator platform from Expand Networks Inc., Roseland, N.J. Expand's solutions have not only significantly boosted WAN and application performance for the 1,200 global customers it serves, but they also support other mission-critical initiatives such as server consolidation, migration from client/server to Web-based applications, server-based computing, disaster recovery, voice over IP, and several others.

What sets the Expand application acceleration solution apart from the crowd is the ingenious combination of multiple services in a tightly integrated platform designed to speed up remote office response times and deliver significant increases in user productivity. These technologies include:

- WAN Optimization
- Application/Protocol Acceleration
- Management and Network Visibility
- Wide-Area File Services (WAFS)
- Security

EXPAND networks

Bottom-line results

The end result is a big boost in remote user productivity, paving the way to simplifying and reducing the cost of the IT infrastructure. Expand solutions empower users by accelerating millions of common transactions such as opening email attachments, logging into CRM systems, VoIP calls, processing orders, tracking inventory, and many others. The benefits tumble to the bottom line as application wait times plummet and productivity soars.

To find out more about the application acceleration solutions that have become the choice of major companies and organizations around the world, visit www.expand.com or call (888) 892-1250.

[ADVERTISEMENT]

EXPAND networks

Retailer *Interstate Batteries* Deploys Expand Accelerators to Speed Up Call Center Order Processing and Customer Enquiries

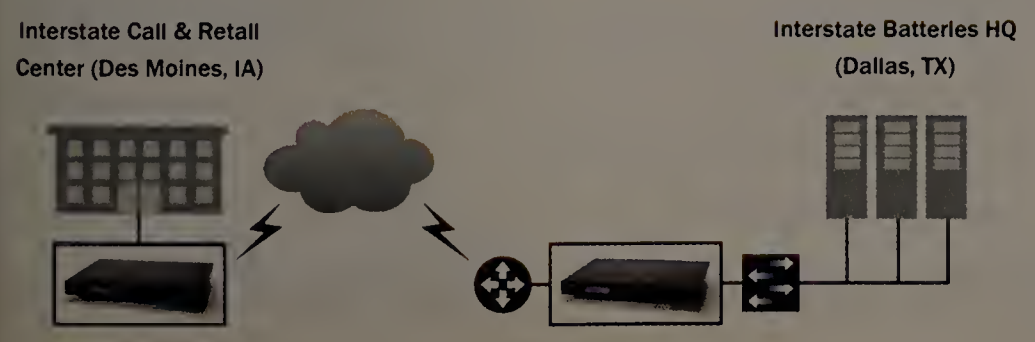
Interstate Batteries is the leading automotive replacement battery company in North America servicing 200,000 retail stores and dealers. The retailer runs both its All Battery call center and retail distribution center out of Des Moines, Iowa with hundreds of employees who require real-time remote access to customer data hosted at the company's headquarters in Dallas, Texas.

Interstate Batteries has strategically deployed Expand Networks Accelerators to proactively manage the delivery of PeopleSoft and Citrix applications to the company's call center and other remote locations. The new applications are used by call center agents to access customer data and process orders. With the Accelerators deployed in 10 key locations on the company's wide area network (WAN), data transfers for PeopleSoft and Citrix applications will be sped up by as much as 10 times.

"When we implemented PeopleSoft and Citrix applications at our Dallas HQs we anticipated that the surge in traffic would considerably slow down the network," c*ommented Chris Yang, Senior Network Engineer at Interstate Batteries.* "We knew that if we tried to roll out these new applications to our call center and retail distribution center out in Des Moines, remote access would be unforgivably slow and could ultimately degrade customer service as well as increase order processing time."

Interstate was determined to find a solution to this potential problem. The company began to evaluate solutions from QoS specialist vendors but discovered that QoS alone would not provide the response time improvements for its critical business applications including PeopleSoft's Enterprise One, Citrix, Microsoft Exchange, and Optum.

Fig.1 The Solution:



Interstate Batteries next turned to Expand for its platform of tightly integrated application acceleration technologies and performed a detailed evaluation on select WAN links "The results were amazing," continued Mr. Yang.

"With the Accelerators in place, we are able to speed up data transfers by up to 10 times which means we can get to customer enquires and orders a lot faster than we previously could."

"In the competitive service sector, we clearly need to provide an outstanding level of service that is fast, accurate and efficient to impress our customers and maintain their loyalty - the Accelerators provide us the guarantee that our critical networked services will always perform up to the mark."

Interstate Batteries has implemented the Expand Accelerators on 10 key network locations. In addition to boosting the company's call-center and retail distribution center performance, Interstate Batteries has also deployed the Expand Accelerators in its PowerCare Division to improve the reliability of its DSL connections. "The installation of Expand has allowed us to downgrade some of our T1 lines, saving us over $36,000 annually on recurring bandwidth costs," concluded Mr. Yang.



Interstate Batteries has already lined up the Expand Accelerators in conjunction with future plans to offer on-line training to 50 of the company's distribution centers as well as the GPS tracking of Interstate Batteries' transportation trucks.

To learn more, visit www.expand.com or call toll free: 1.888.892.1250

The Skinny on Service Providers

CONTINUED FROM PAGE A-16

sons—ease of configuration and management and one-stop support and service," she says.

Relying on a service provider to optimize traffic delivery also saves on having to maintain infrastructure, such as servers or appliances, in remote locations. Managing and patching equipment, as well as keeping licenses up-to-date or dealing with co-location issues, could quickly overwhelm a resource- and budget-constrained IT staff.

Another benefit to service providers is that they often are the only ones that can do "true" route optimization, she says. They control infrastructure close to the user and throughout the network to ensure a clean path. They also use route optimization, compression, caching, and other techniques to speed delivery to locations, no matter their bandwidth restrictions.

"Anyone that can't guarantee where their customers are coming from would be good for these services," she says.

For instance, an organization that wants to offer Web site-based access to corporate applications to thousands of global employees could find performance challenging, Johnson says. Not knowing where and over what connection they are logging on would make it difficult to install infrastructure to support their needs. However, using a managed service could alleviate this strain and ensure a secure, solid connection. ■

Having your cake and eating it

CONTINUED FROM PAGE A-14

"Sometimes you're delivering information across wide-area links and you don't know the endpoints. That could be sensitive data, and you need to be careful about what's left out there," he says.

Built-in security

Crawford says IT managers should consider WAN optimization tools that terminate connections on a number of levels. "You should think about TCP, HTTP, and SSL links. They are a natural point of defense," he says.

Many vendors build security into their optimization and acceleration offerings. One example is application firewalls, which allow organizations to protect specific applications over the wide area. "If you're trying to defend the network and deliver an application, firewalls offer security but also high performance," he says.

Another is SSL virtual private networking, which includes cryptographic offload. "You're relieving the application server from having to do the heavy lifting," Crawford says. This speeds the application performance overall. He adds that VPNs encrypt and segregate traffic across the Internet, keeping traffic safe.

Finally, for true client/server security, companies can opt for an end-to-end solution that secures the link between a host of enterprise resources and remote users. These products use endpoint scanning, device and user authentication, and more to ensure the integrity of the user logging on. There are also monitoring, access control, and policy enforcement features that help protect the enterprise network. ■





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On Technology

John Dix

Open source: The apps wave

Matt Asay, founder and program director of the Open Source Business Conference, opened the recent OSBC event in Boston saying the third wave of open source is arriving.

He characterized the first wave as adoption of Linux, the second as the acceptance of open source database and application servers, and this third wave as the emergence of applications.

But not applications as we know them. "Applications that are in a perpetual state of beta," Asay said. "They are put out there, and customers download them, but they are never really done." While fully functional, the programs keep evolving iteratively, creating what Asay called softerware.

Companies from Novell to Google are beginning to work this way, he said, and he expects others to follow suit. He believes the open source movement is more about changing the way software is sold and distributed than how it is developed.

In a keynote speech Hal Stern, Sun's CTO of software, argued that perpetual beta isn't a bad thing. "We need to stop thinking about software as a manufactured asset and rather as something organic."

But he doesn't see open source displacing large software companies, simply because it is hard to get people to develop stuff for free. The community, he said, is perfect for incremental innovation, the goal behind Sun's Open Solaris project.

Regarding the application wave, Stern predicts more vendors will pick up open source projects and host them as services instead of trying to package them for sale.

While agreeing that the application segment is the most exciting part of the open source movement, Novell's newly appointed CEO, Ron Hovsepian, said that acceptance has been slow, because "we're asking too much of customers. They have to be the systems integrator. We have to do a better job of packaging."

David Skok, a partner with venture company Matrix Partners, hosted an after-hours debate among buyers and suppliers and gave the OSBC crowd the highlights the next morning.

One thing the two sides agree on, Skok said, is that open source will never become mainstream on the desktop. The summary judgment: "It's pennies on the dollar. Who cares?"

The group also agreed that customers who buy open source products don't change or modify the code, one of the touted benefits of open source. Nonetheless, buyers say access to the source code has value, if only for diagnostics.

Who won the debate? "The buyers always win," Skok said.

— John Dix
Editor in chief
jdix@nww.com

Opinions

QoS needed

Regarding Mark Gibbs' Gearhead column "Vonage: On again, off again" (DocFinder: 9725): This scenario is familiar to me, in that I have had Vonage as my phone provider on Cox Communications cable Internet for almost a year. One major problem with it was that my router at that time did not have the ability to set up QoS for the telephone adapter. Once I upgraded to a Linksys router with that capability, I had no more dropouts, choppiness or other problems. Readers should know that a router with QoS is a must if you are doing VoIP.

Craig Wolf
Omaha, Neb

Just a phone, please

I fully agree with Howard Anderson's column "Curmudgeons of the world, unite" (DocFinder: 9724): Stop the nonsense. No more morphed electronic devices.

Give me a cell phone that sounds as clear as a landline phone 100% of the time, lets me know when I am about to drop a call, rings me whenever I am in range and notifies me of voice mail the moment I turn it on, not one or two days later. That's it. No camera. No video. No voice recorder. No music. No games. No nonsense. Just a phone!

Then apply this principle to other devices, such as printers, faxes, scanners, copiers, camcorders, alarm clocks, ovens, VCRs and DVD/CD players. (Do I really need a digital clock in every electronic device in the house?) Oh, and can't my car just be a car? I don't need a rolling entertainment center.

Jack Pouchet
Irvine, Calif.

Dealing with amorality

Regarding Mark Gibbs' BackSpin column "Dealing with crazy corporations" (www.networkworld.com, DocFinder: 9723): The amorality (or immorality, depending on your point of view) of corporations has been well known and understood by the cynical, the skeptical and the poor for a long time. It was a fundamental component in the 1960s' anti-corporate movement, antitrust legislation in the late 19th century and Karl Marx's theory of socialism. For the reasons Gibbs states, business ethics usually lose when they conflict with the goal of profit.

This amorality, like most other attributes, is magnified by size. Small corporations are impacted by the decisions of an individual. Corporations with assets and revenues millions of times that of the average worker have correspondingly greater power; it becomes impossible for individuals to make an impact. Only a correspondingly large organization — government at the appropriate level — has sufficient power to effectively deal with large corporations.

Sadly, the aphorism that "it is impossible to legislate morality" places serious limits on the positive effect government can have on corporate behavior. This limit is further eroded when corporations can and do freely use their economic muscle to influence politics, partly or completely neutralizing the only entity capable of controlling corporate excess.

Perhaps a solution can be found, but we will again be faced with trade-offs between the many economic benefits corporations provide and the clear abuse of power endemic to the system.

Randy Grein
Bellevue, Wash.

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

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Readers respond

Find out what readers are saying about these and other topics. **DocFinder: 1030**





CYBER SPACES
Daniel Blum

Don't lose control with outsourcing

Two or three years down the road, would you like to see your enterprise IT security go out of control? Would you like protection to be almost completely reactive, expensive, always responding to emergencies and fraught with surprises?

Try outsourcing.

I'm not talking about a limited-scope project such as outsourcing benefits. I'm talking about the big kahuna — outsourcing the entire IT-network computing environment.

There have been a few very large organizations that turn major applications — or all the network except for applications — over to third-party operations, provisioning and help desk. Outsourcing can save companies a lot of money, but it can also cause them to lose control of IT security.

We have seen many problems over the years. Most come down to the organizational walls that outsourcing erects and the difficulty of anticipating all the contingencies in a contract.

Frequently, outsourcers low-bid their offer to get the business and then try to make it up in change orders. But running IT security two or three years from now the way you ran it last year isn't going to cut it. Threats, vulnerabilities and consequences evolve. You must be able to adapt the architecture.

One company's outsourcer was good at responding to incidents but wasn't helpful in the post-incident review. Again, adaptability erodes. Another company had some business units that had outsourced and some that had not. Confusion over whether a worm had traversed "in scope" or "out of scope" locations complicated its response.

Service-level agreements (SLA) could rebound against security. Modern organizations can no longer rely on a single firewall; large networks generally need to be divided up into zones of trust that separate systems with different connectivity requirements and risk levels. But an outsourcer with an SLA that's based only on performance will resist creating new perimeters after the contract's been inked. A lack of zoning could leave your network wide open to emerging threats.

> Be sure that security is considered when you're planning outsourcing.

A company can give up control over IT, but it cannot transfer its responsibility to the shareholders for the potential consequences. If secret formulas or other intellectual property fall into the hands of competitors, or if material deficiencies turn up on a Sarbanes-Oxley audit, blaming the outsourcer is cold comfort.

Be sure that security is considered when you're planning outsourcing or trying to bring an already-outsourced environment back under control. Define security-related roles and responsibilities clearly and completely. Specify clear security objectives in the SLA for integrity, confidentiality, availability, accountability and use control; demand sufficient redundancy; and require sufficient separation of product functions and staff duties to prevent common mode failures. Retain the ability to monitor and audit the outsourcer's environment to independently verify fulfillment of the objectives. Require the contractor to support post-incident review and strategic adaptation of the protection architecture in addition to day-to-day operations and response.

But wait, there's more. Even if you're using the IT Infrastructure Library for SLAs, don't rely on it for security. Check out ISO 17799: 2005 instead (see www.networkworld.com, DocFinder: 9722).

Blum is senior vice president and research director with Burton Group, an integrated research, consulting and advisory service. He can be reached at danjblum@yahoo.com.



ON SECURITY
Winn Schwartau

With VoIP, it's déjà vu all over again

If your company is planning to exploit the incredible power, flexibility and cost savings offered by VoIP, there are two things you need to know: VoIP people don't think like IP people; security is going to be a nightmare.

Recently I spoke with the leading VoIP folks from around the world. This elite group represents VoIP subsidiaries and working divisions of something like 94% of the planet's telecom service providers. I got called in to provide an in-context and out-of-context view of VoIP and security. I began with a couple of easy, soft-pitch questions. Or so I thought.

"How many of you use penetration testing as means to maintain the integrity and continually test the security of your VoIP networks?" I asked. Not one hand went up. I figured there was a language problem, so I rephrased the question. "How many of you have a dedicated staff of security people whose sole job is to stress the network to find problems before the customer does?" Again, no hands were raised.

After recovering from my shock, I asked, "Why don't you?" The most common response was, "Why should we?"

That's when I retreated to the security basics. I talked about how denial of service and distributed DoS can paralyze VoIP, and about data-transfer integrity, and asked, "What are you guys doing about this?" They shrugged.

The VoIP community has not travailed with us for the last 25 years and learned the lessons of virtual venom and online conflict. Their biggest concerns are, first, QoS (they get paid more and earn greater profits when the QoS is high; they lose points and money when QoS is low) and, second, billing accuracy.

Historically the endpoints of communications have been dumb. One lesson the IP world has learned is that complexity breeds insecurity; dumber is securer.

But the world the VoIP crowd is building uses endpoints that are much smarter. Therefore, the VoIP version of security is bass-ackwards from the IP approach. And you're planning on bringing VoIP into your enterprise? Hmmm.

> I assumed VoIP guys were security-clueful, and I was dead wrong.

Next, I asked this group of now-nervous VoIP nellies, "Can any of you tell me where your VoIP and data networks meet, converge, talk to each other, share facilities, etc.?" Silence. I rephrased the question: "How do your VoIP and data networks talk to each other?" Still sort of blank stares.

One guy chirped, "Ah, ... they don't." Incredulous, I asked a number of people whether their VoIP and data networks were completely isolated from each other, and the consensus was that they were disparate networks.

I whipped out a Sharpie, ran to the flip chart and scribbled some clouds, cylinders and routers. After several Pollock-esque flourishes, someone called out, "Mine connects there," and someone else said, "Sure, it has to connect here and there and there to make it work." It was just that they apparently had never been asked the question in a security sort of way.

Over the next several hours, we learned a great deal. The communications world is moving toward VoIP but does not have the security expertise it needs in-house to meet the real-world stress it will encounter. I learned a lesson I should never forget: I assumed these guys were security-clueful, and I was dead wrong.

They learned, I hope, that the threats the VoIP industry is going to face will be merely variants of what it has already seen more than once. I also hope they carried away something more important: an awareness that security must be designed in from the beginning and that the next generation of VoIP gear must have a more aggressive security posture than the current one.

As for you? If you're getting into the VoIP world, great, but be cautious. Make sure you put on your bad-guy hat and stress the vendor and the technology. In a few short minutes it's not too difficult to come up with a healthy range of attack vectors. Better for you to detect and delay VoIP deployment problems than to dive headlong into a place none of us want to revisit.

Schwartau is a security writer, lecturer and president of Interpact, a security-awareness consulting firm. He can be reached at winn@thesecurityawarenesscompany.com.

COOL YULE TOOLS

EPISODE VI: RETURN OF THE GIZMOS

BY KEITH SHAW
PHOTOS BY CHRISTOPHER NAVIN

Very early adopter Keith Shaw with his first tech toy, a 1978 lightsaber. For more reviews in our sixth annual holiday gift guide, visit us online at nww.com,Docfinder: 9735.



< Epson P-2000 Multimedia Viewer, $500. At first glance this looks like something to hold your digital photos until you can transfer them to a PC. But this device can actually give an iPod a run for its money: The 40G-byte capacity can hold a lot of music and video files, as well as display digital camera images on its beautiful 3.8-inch color LCD. Professional or enthusiast photographers will fall in love with this device, but if you also want to listen to music, watch videos or just carry around your PowerPoint files, there's nothing stopping you.

A long time ago, in an apartment complex not so far away, young Keith Shaw falls asleep, having watched the "Star Wars Holiday Special" earlier in the evening. Filled with Cocoa Puffs and peanut butter, Keith dreams about the future, holidays and all of the wonderful technologies that network executives will give to their friends and families 27 years in the future. . .

< Dell 2405FPW monitor, $1,200. These days you can end up spending more for your monitor than you do for your PC. This outstanding 24-inch LCD monitor from Dell supports that choice. It includes four USB connections, 1,920-by-1,200-pixel resolution, a built-in memory card reader and digital video interface. The widescreen display ets you monitor multiple applications without toggling, and the fast response rate (between 12 and 16 millisec) will give you good performance for DVDs and games. If that's not enough, the screen also rotates 90 degrees for your choice of landscape or portrait viewing.

The dream begins here . . .

Epson Perfection 3590 Photo Scanner, $130. Old photos and negatives get a boost with the photo restoration features on this flatbed scanner. Turn your old 35mm negatives and slides into 21st-century digital images.

Fujitsu LifeBook P1500 series notebook, starts at $1,500. This pen-enabled convertible notebook weighs just 2.2 pounds, has integrated 802.11a/b/g wireless and comes with the Windows XP operating system instead of Windows XP Tablet Edition. Its touchscreen lets your fingers do the pointing—no special pens are needed.

Uniden ELBT595 Bluetooth cordless phone, $250. This cordless phone works with a standard telephone line, but it also can grab the WAN on a Bluetooth-enabled cell phone to make outgoing calls on your cell phone's minutes. This phone is perfect for people who don't want a home landline or who want to recharge their cell phone in the charging base while still making phone calls (because they're using the cordless handset).

DLP ViewSonic PJ256D projector, $2,000. This projector packs a big punch for its size, offering a crisp image (1,024-by-768-pixel native resolution) for users who want to plug in their laptop for presentations or connect to a high-definition signal to watch the big game at home. The projector's 2.2-pound weight makes it easy to bring it from work to home and back again.

Toshiba Portege R200-S234 notebook, about $2,000. This ultra-light, ultra-thin notebook has a very sharp screen (12.1-inch, 1,024-by-768-pixel resolution display). Integrated Wi-Fi and Bluetooth connectivity keep you unwired and connected when you're on your couch checking fantasy football scores. You'll appreciate its small size when you travel or work in coach on an airplane.

Westinghouse LVM-37w1 Video Monitor, about $1,600. Our favorite TV this year is this high-definition beauty — not only does it offer a great picture for HD signals (the resolution offers 16.7 million colors), but the multiple input options also let you connect devices ranging from a DVD to a cable set-top box to PCs and console game systems. The TV includes detachable speakers so you can move the sound around or plug in external speakers to create a 3-D environment.

Iogear Laser Travel Mouse, $20. When you travel, you can find yourself working on a lot of different surfaces, so it's nice that the laser technology of this USB mouse will let you move the cursor around quickly without repetitive motions. The mouse's smaller size and retractable cord make it easier to pack up and go than other bulkier mice.

APC 3-in-1 Wireless Mobile Router WMR1000G, $70. Travel-ready routers let you add wireless to a hotel's broadband connection (so you can work on your bed if you want), but this one is special because it can turn into three different devices. A mode-selector button lets you turn the device into an access point, an access point/router or Ethernet client. You can also set security easily, which makes this good for mobile workers who need to be protected while on the road.

Zyxel P2000W-U2 Wireless VoIP phone, about $200. With the provided Broadvoice service, you'll be able to configure the service quickly and easily. The 802.11b/g connection will give you a dial tone anywhere there's a wireless access point, and the security settings (64- or 128-bit Wired Equivalent Privacy) will keep conversations private.

ZioCorp FoneMate SD and SIM card manager, $60. Every GSM cellphone owner needs this device, which make it simple and painless to transfer phone numbers and address-book records from an old phone to a new one. Its ProPix Media Manager software can also transfer images and ring tones between a PC and SIM card or between other memory cards. This will save hours for anyone who has to transfer data on cell phones.

Philips 200W6 20-inch LCD monitor, $600. This business-oriented LCD monitor has a widescreen display that lets users display two letter-sized pages side by side, eliminating the need to toggle between two or more applications. Compatibility with Philips' SmartManage asset-management technology can monitor the location of the monitor, in case anyone wants to take it home and use its [illegible] response time and [illegible] by-1,050-pixel resolution for watching a DVD.

Logitech G7 Cordless Laser Mouse, $100. This mouse's most comfortable [illegible] aimed at gamers and others looking for precise control



v HP Photosmart M517, $200. You no longer have to be intimidated by a 5.1-megapixel digital camera. The M517 includes a 2-inch display, much larger than other digital cameras, making it easier to capture and view photos. A "fast shot" mode can eliminate the delay sometimes associated with digital cameras. An AC adapter can charge the rechargeable batteries inside the camera, another nice feature.

^ Sony Vaio T350P, about $2,100. This 3-pound notebook has an integrated wide-area wireless connection (Cingular's EDGE network), which means you won't be searching for a coffee-shop Wi-Fi hot spot if you need to download your e-mail late at night (it does include Wi-Fi in case you still want to). The 10.6-inch widescreen display and Dolby headphone and virtual speaker technology will let you watch movies enjoyably on the device if you don't like what the airline is offering.

v Toshiba Qosmio notebook, $3,000. Is it possible to fall in love with a notebook? It is with the Qosmio G25 series, a sleek black unit with a 17-inch widescreen display (with TruBrite technology), 1G bytes of RAM, two 60G-byte hard drives, integrated wireless (802.11a/b/g and Bluetooth) and a TV tuner. This notebook is bigger than most desktop PCs that we've seen lately.



COOL YULE TOOLS

COOL YULE TOOLS

< Das Keyboard, $80. "Use the force!" At first you might think this keyboard, which is for serious touch-typists only, is gimmicky. (it's all black, and there are no key labels). But once you try it out, its tactile feedback and overall nice feel will actually make you a faster typist. Just be prepared for some funny looks from co-workers or family members.

< Sony VAIO V620G, about $2,700. If all future computers are all-in-one's, you will be able to thank Sony. A beautiful device that combines a 20-inch widescreen LCD with a wireless Windows PC and integrated speakers, the V620G also includes a TV tuner card and personal video recorder software to let you record and store your favorite TV shows. Even if you have a ton of space for a separate CPU and monitor, you'll appreciate the look and feel of this system. It's good enough to hold a place of honor in your living room.

(three sensitivity settings let you create a fast- or slow-moving mouse). More importantly, the cordless base station can also recharge the mouse's lithium ion batteries (two batteries are bundled with the mouse).

Ultimate Ears Super.fi 3 Studio earphones, $100. Sweet little in-ear headphones are great for traveling or working in a noisy environment. So much outside noise was blocked, we couldn't hear ourselves typing — a surreal experience at first. Even a plane's engine noise is lessened, letting you actually hear the audio during the in-flight movie.

Lenovo S51 ThinkCenter desktop, about $1,100. The desktop made for the IT department, the S51 includes an easy-opening cover and clearly labeled internal components that make fixes and upgrades fast and simple. An integrated fingerprint scanner lets departments implement strong authentication procedures. The size of the desktop is also impressive, as it's smaller than a telephone book.

FireStore FS-4 DV hard drive, $750. This FireWire hard drive can be used to capture digital video directly from a video camera, eliminating the need for tapes, as well as to transfer the capture of the tape to PC before editing. You can add a second FireWire cable and directly edit the video right off the hard drive. If you're getting ready for the upcoming video blog revolution, you'll want to save a lot of time with this device.

Skullcandy Skullcrusher headphones, $90. If you've spent good money on a digital music player and then you discover that you have to listen to it on wimpy earbuds with tinny sounds, you might be a bit disappointed. That's why we loved the Skullcrusher headphones, which include an embedded bass amplified subwoofer inside the headphones. Crank up the sound enough and you can feel the bass in your dental work. Cool.

Humax DRT400 DVD Recorder with TiVo, $400. This box is a 40-hour TiVo Series 2 system that includes a DVD burner that can easily transfer recorded shows directly to a DVD. Although it takes some time to burn a show to a DVD (about 30 minutes for two hours of shows), at least you can watch TV while it's burning.

JBL Encounter speakers, $1[illegible] Even if these speakers

leave your desktop their alien-like design will provide you with an out of this world sound system. The 13-watt speakers and 34-watt subwoofer provide enough power and good sound for your PC system, music players or game consoles.

Logitech V20 Notebook Speakers, $80. Chances are you have an old notebook with teeny-tiny, tinny speakers, made back in the day before people started storing their digital music files on computers. If you are still stuck with one of these notebooks, you can now attach these USB speakers for a better sound experience. They actually make incoming e-mail sound more melodic.

Verizon Wireless VX8100 (by LG), $150. This clamshell-style phone might not have all the bells and whistles of the latest cell phones, but its 1.3-megapixel camera, dual-color screens, Bluetooth wireless and ability to connect to Verizon's EV-DO network for high-speed data downloads (including video clips) should keep you happy and not put a dent in your wallet.

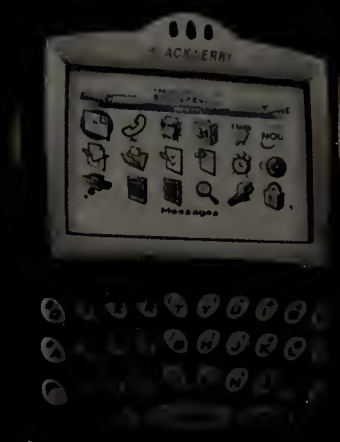
Cowon America iAudioX5, $300. An iPod killer that actually might live up to its claim, this 20G-byte device includes support for several audio-file formats (including uncommon ones such as OGG, FLAC and ASF). An FM radio feature is a nice surprise, letting you listen to the radio when you get bored with your play lists. The 1.8-inch color display is good for watching movies or viewing photos. We actually got jealous looks from several iPod users we showed this device to.

Sling Media Slingbox, $250. Simply the best way to watch your TV or recorded shows from anywhere on the planet, the Slingbox attaches quickly to the TV feed in your home and your broadband connection. Its bundled software lets your watch your TV feed from across the town or across the world. If you travel a lot and are sick of watching the hotel TV, grab a Slingbox.

Samsung SyncMaster 930mp LCD TV monitor, $775. It's tough to call this device an LCD TV or computer monitor because it's a little bit of both. It's more like a multi-function monitor with a bunch of different video inputs that let you connect a TV feed, computer, gaming console, DVD player. The 16-inch display also gave us

See Yule tools, page 68







Clockwise from top left:

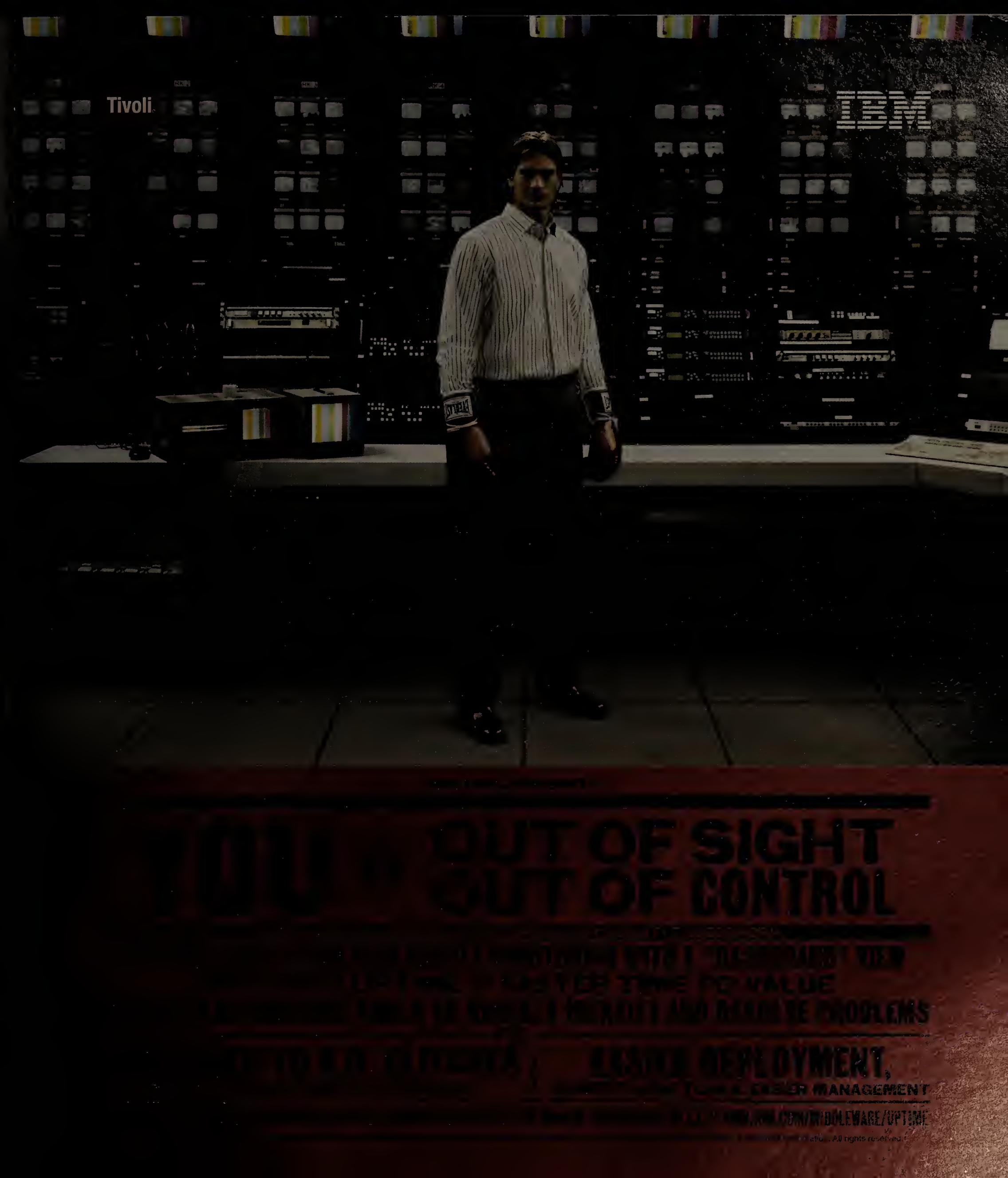
Palm TX handheld, $300. Palm's latest PDA has internal Wi-Fi and Bluetooth for connecting to the Internet, a large color screen (320 by 480 pixels) for viewing photos or Office-based documents, and a media card slot that can play your digital music. The TX is a great example of combining the best business features with something that's fun to play with. It's the best device from Palm that isn't named Treo.

Sprint Smart Device PPC-6700, about $630. The latest cell phone/PDA hybrid from Sprint includes the latest Windows Mobile OS, EV-DO wireless network capability, 1-megapixel camera and a slide-out keyboard for text input. Wi-Fi and Bluetooth complete the wireless features of this 6-ounce device.

Nextel 7520 BlackBerry, $200 (plus service fees). The only BlackBerry device that adds GPS navigation features, the 7520 from Sprint Nextel includes a cell phone, organizer, the Nextel Direct Connect walkie-talkie service and Bluetooth wireless, and makes it possible for users to store and view image file attachments. It's an all-in-one device for any on-the-go mobile worker.

Sony MFM-HT95, $800. It's fair to call this more a multi-function monitor than just a TV or LCD monitor. Multiple video inputs let you hook up any number of different sources, including a gaming console, DVD player, TV cable feed or PC cable. An easy-to-understand remote control quickly switches video source signals to get you to the right feed quickly. Integrated speakers complete the package.

Buffalo Link Theater, $300. The next generation of networked media players, the Link Theater combines a DVD player with network access to let you play music, photos and videos stored on a different computer system (or networked-attached storage device). The system streams the multimedia across an 802.11g network without any latency or jitter, which were problems with earlier networked media players.


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MANAGEMENT

Yule tools
continued from page 66

enough space to work on our computer and watch TV at the same time.

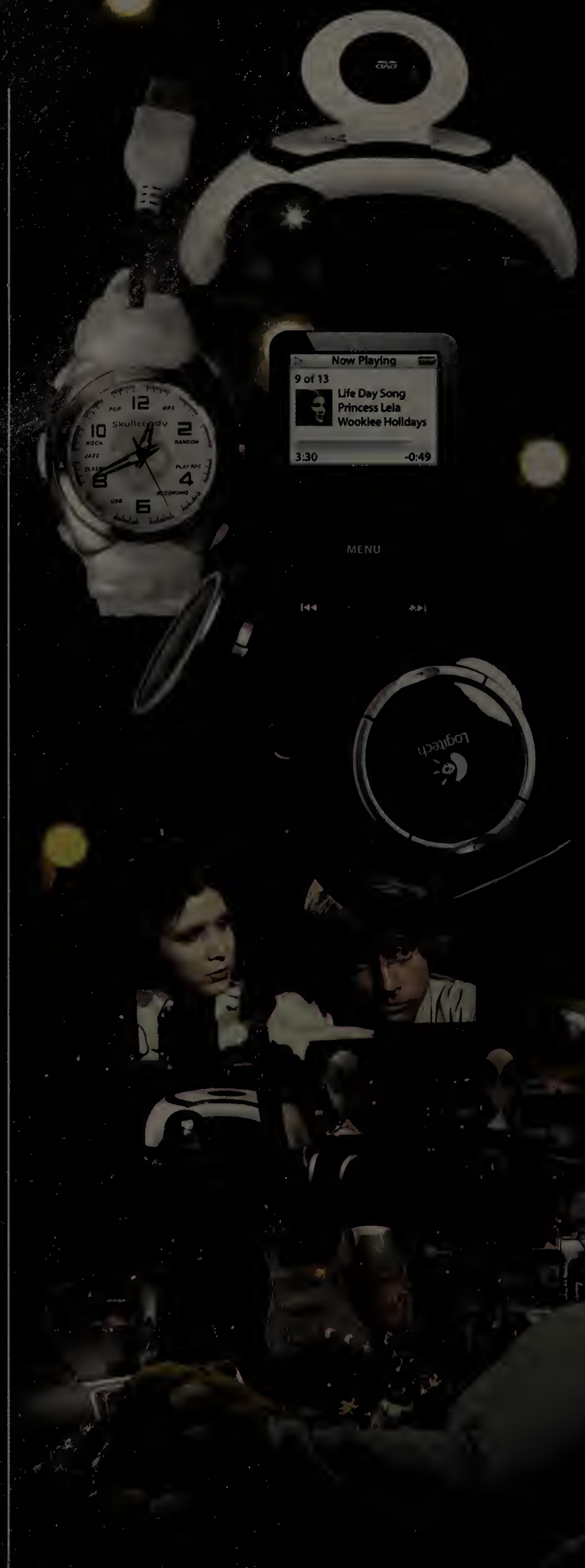
Lapworks Laptop Legs, $10 to $20. One of the easiest ways to raise your notebook to help alleviate the heat it generates is to attach these plastic laptop legs to the bottom of your notebook. Other than creating your own notebook stand, this is the easiest and most inexpensive way to help let hot air escape or let cool air in.

Seagate USB 2.0 Pocket hard drive, $100. A round and portable hard drive that fits in your pocket and stores up to 5G bytes of files. A retractable USB cord means no messy cables to carry around when you're transporting the drive or throwing it in a laptop.

SmartDisk FireLite 100GB USB portable drive, $263. If you want to carry your entire music, video and photo collection with you at all times and not be weighed down by the device, this drive is worth a look. This many gigabytes in such a small package is truly impressive. Back-up software that ships with the drive will let you automatically and securely save all of your files when connected to a PC or Mac.

WowWee Roboraptor, $100. What would a gift guide be without a robot? This year's entry is Roboraptor, a walking, roaring robotic dinosaur from the makers of last year's Robosapien. The Roboraptor walks around, has three distinct "moods" and includes a remote control that lets users program different actions. The robot has sensors that it will react to when motion is detected. The sensors around the robot's head make it seem like the dinosaur is about to attack your hand when it approaches. This robot might actually be too scary for young children, as its screams sound pretty frightening.

Altec Lansing iM7, $250. The iM7 will turn your iPod into a full bodied boom box, providing big sound for parties at the beach or in the backyard. The universal cradle gracefully holds any dockable iPod securely, and it will recharge the unit as well. A tiny wireless remote control lets you switch songs without having to run over to the device, and S-video output support lets you dis-



Top to bottom:

Optoma Movie Time, $1,500. Create an instant movie theater with this device, which combines a DVD player, integrated speakers and a projector in one unit (you no longer have to mess with hooking up a laptop or other DVD player to a separate projector). The unit includes other video inputs and an optical audio output so you can attach other video devices (such as a gaming console) to create a better sound experience.

Skullcandy MacGyver MP3 watch, $170 to $300 (depending on capacity). Storage drives and MP3 players converge with this MP3 watch. It's a bit large for business users, but we're told that big watches are now hip. What is especially cool is the embedded audio player that can play MP3 or WMA files. A voice recorder feature lets you walk into your boss' office to record conversations (or do other fun stuff). Available in stormtrooper white or Darth Vader black.

iPod Nano, $250 (4G bytes). Our love affair with the iPod continues, with the thinnest and tiniest device yet. Put about 1,000 songs on the 4G-byte model, and it's perfect for working out, traveling or just sitting and admiring its color screen and lookin' at pictures.

Logitech Wireless Headphones for MP3, $120. Hey, Bluetooth is useful for something other than cell phones! These behind-the-head headphones include a Bluetooth wireless adapter that connects to the headphone jack of your music player. You can then walk around enjoying your music up to 30 feet away from the player. That can be good for things such as workouts where you don't want to get tangled getting in the way.

Exhausted from another year of testing, Keith falls asleep and dreams about all the gift-ideas you can find online.



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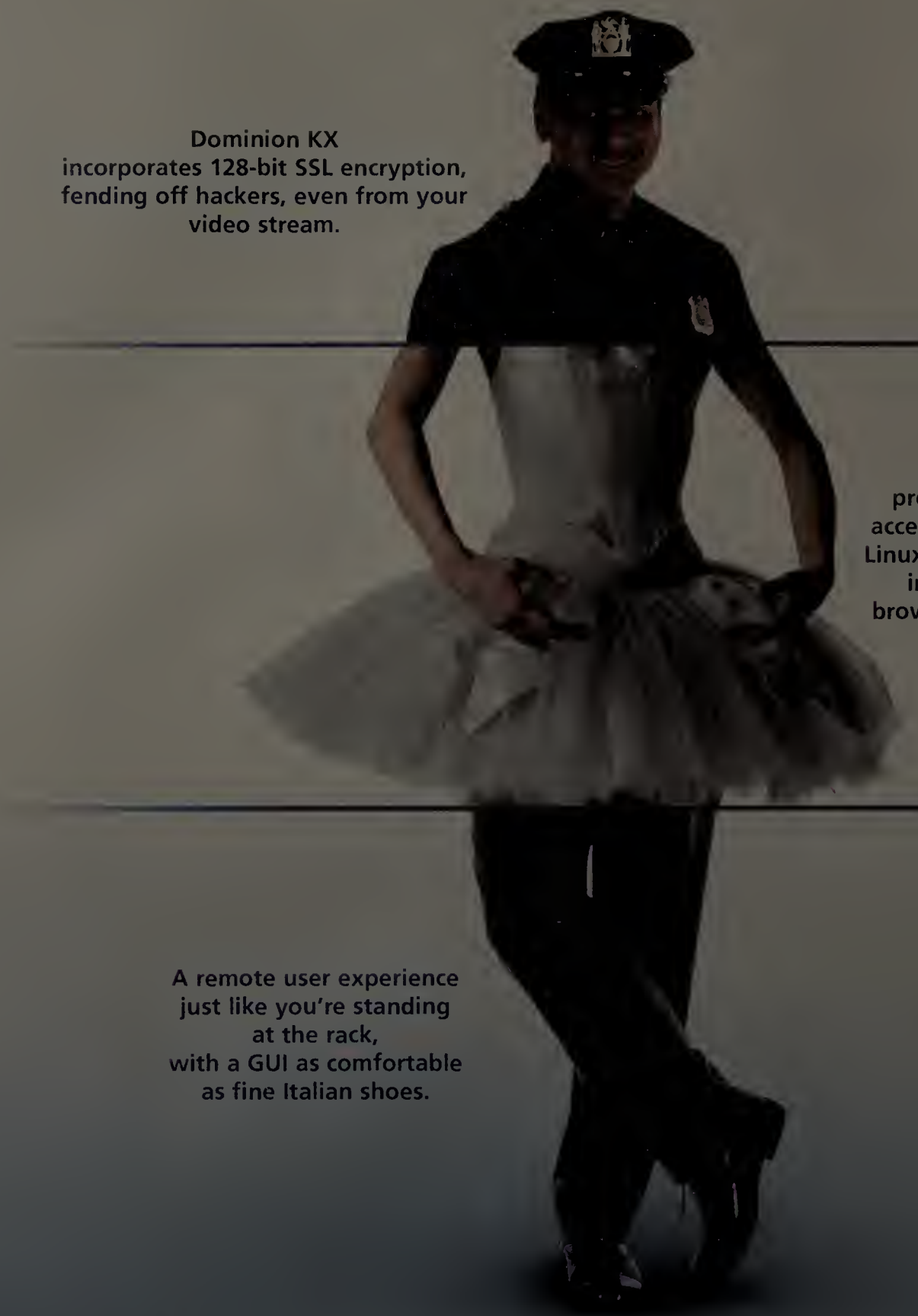
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Nationwide formalizes capacity mgmt.

An IT insider recounts cross-company effort to create a process model.

BY KENNETH CLARK

In January 2004, I was selected as process developer for Nationwide Financial in a cross-company Information Technology Service Management development project for capacity management.

ITSM is a process-based framework for managing IT services. My responsibility as the process developer for Nationwide Financial was to work with process developers from Nationwide Services Co. and Nationwide Property and Casualty to develop an enterprisewide capacity-management process.

The Information Technology Infrastructure Library (ITIL) is the de facto standard in IT service management worldwide, defines capacity management as "the process for ensuring that IT infrastructure capacity matches the evolving demands of the business in the most cost-effective and timely manner."

The most attractive aspect of this project was the opportunity it provided to create a common language that would be accepted and used by three organizations within the same company. To achieve this, the process developers compiled the best practices they had in common and applied them to each participating organization. At a high level a project like this would add value by accomplishing the following goals:

- Promoting a common awareness and understanding of capacity management.
- Improving communication.
- Improving current practices.
- Creating and retaining valuable information.
- Developing repeatable processes.
- Reducing capacity costs.

Having considered these potential benefits, the project should easily sell itself and add value for the entire enterprise. The team included three process developers, a process architect, a technical writer, a project manager, a program manager and a project sponsor.

During our initial sessions, we gathered information from various sources to gain a general understanding of the industry's approach to capacity-management development. Because this was Nationwide's first effort to develop such a process, the experiences of other companies were examined.

To remain consistent with previous ITSM processes, the capacity-management approach to be developed would comply with the standards of ITIL.

With this directive, the capacity-management process was developed to apply to all three Nationwide participants. That proprietary model depicts how information flows through the primary and non-primary capacity-management processes. In addition, the model depicts the output of the process and shows how constant communication is built into the flow.

After the process model was approved, the next step was to develop procedures for each activity in it. Although input from the three Nationwide organizations differed at times, the group had to keep in mind that it needed to retain current best practices as well as maintain ITIL compliance in developing the procedures. To do this, we conducted a current-state analysis with practitioners in each Nationwide organization. Practitioners are generally individuals at the specialist or consultant level who monitor and handle daily activities related to capacity management.

To prepare for this analysis, the team distributed a questionnaire to the target application areas with the goal of identifying capacity-related best practices and incorporating them into the process.

The development team found that all three organizations had a common approach to capacity management: It was usually addressed after something had broken or a threshold had been exceeded, events that frequently resulted from practitioners not being informed in a timely matter about new capacity needs created by the addition of equipment. There also were no signs of proactive problem management. Both situations communicated the need for a formal capacity-management process.

Keeping current conditions in mind, the team developed process flows for each activity identified in the model. For example, the model includes primary processes, such as managing business, service and resource capacity. For these processes, the team gathered and assessed data, made recommendations to customers and notified stakeholders about potential effects on capacity.

These process flows had to satisfy the needs of each participating organization to add the greatest value to Nationwide as a whole. Accompanying each process flow were activity descriptions and work instructions. When the flows were completed, the process architect reviewed them for accuracy, continuity and ITIL compliance. Then we conducted a training class for practitioners to review the process.

This training was a critical element in improving the capacity-management process — and, in some cases, introducing one. All practitioners agreed there was a need for a formal process and were able to see the benefits it would yield. They also had the opportunity to compare notes on capacity-related incidents, identify common points of pain such as the timing and flow of communication, and ultimately see how the process can help.

Throughout the development process, the team kept in mind that the success of the capacity-management process would depend on its acceptance by practitioners and systems users. To help achieve this, current ITIL-compliant best practices, including mandatory testing, communication procedures and establishing data repositories, were retained and incorporated into the capacity-management handbook. As a result, practitioners' acceptance came without opposition.

The group is preparing to move into the implementation phase and is confident that the practitioners and systems users will remain enthusiastic about the ways the capacity-management process will benefit their daily activities.

Because these key players were involved in the development process, we learned from each other, listened to and addressed each other's needs, and created new processes that add value and efficiency. Nationwide's consolidated, cross-company approach fostered interactions by developers and practitioners that otherwise would not have occurred. Maintaining this level of engagement and collaborative input will ensure success in subsequent phases of the capacity-management project.



STUART BRIERS

Ken Clark helped promote a common awareness of capacity management within Nationwide's business units.

Clark is a process developer for Nationwide. He can be reached at CLARKK14@Nationwide.com.

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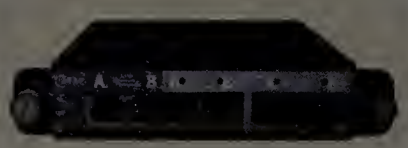
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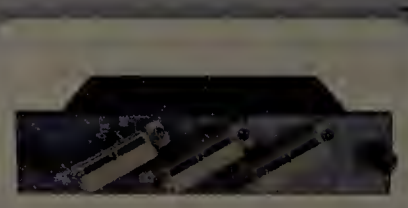
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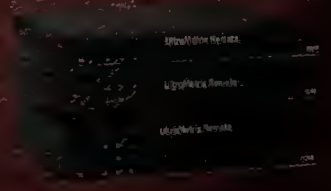
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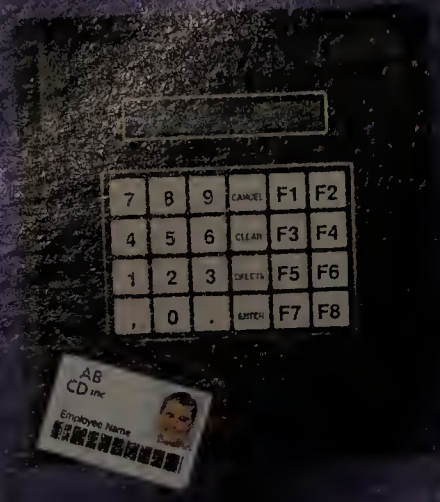
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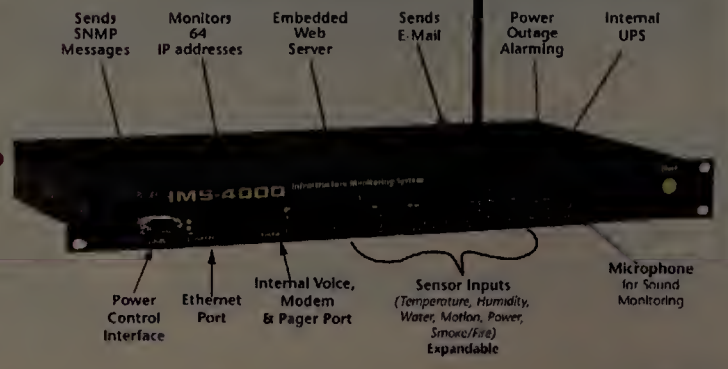
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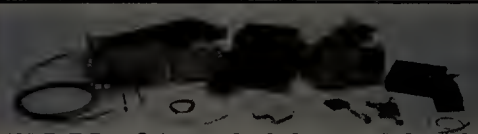
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Network World, Inc.

118 Turnpike Road, Southborough, MA 01772
Phone: (508) 460-3333

TO SEND E-MAIL TO NWW STAFF
firstname_lastname@nww.com

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Sales Offices

Carol Lasker, Executive Vice President, Sales
Jane Weissman, Sales Operations Manager
Internet: clasker, jweissman@nww.com
(508) 460-3333/FAX: (508) 460-1237

New York/New Jersey
Tom Davis, Associate Publisher, Eastern Region
Elisa Della Rocco, Regional Account Director
Agata Joseph, Sr. Account Coordinator
Internet: tdavis, elisas, ajoseph@nww.com
(201) 634-2300/FAX: (201) 634-9286

Northeast
Elisa Della Rocco, Regional Account Director
Internet: elisas@nww.com
(508) 460-3333/FAX: (508) 460-1237

Mid-Atlantic
Jacqui DiBianca, Regional Account Director
Renee Wise, Account Coordinator
Internet: jdibian, rwise@nww.com
(610) 971-1530/FAX: (610) 975-0837

Midwest/Central
Tom Davis, Associate Publisher, Eastern Region
Agata Joseph, Sr. Account Coordinator
Internet: tdavis, ajoseph@nww.com
(201) 634-2314/FAX: (201) 712-9786

Southeast
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(404) 504-6225/FAX: (404) 504-6212

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Internet: bbogart@nww.com
(949) 250-3006/FAX: (949) 833-2857

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Caitlin Horgan, Manager of Marketplace/Emerging Markets
Chris Gibney, Sales Operations Coordinator
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(508) 460-3333/FAX: (508) 460-1192



Computer Associates

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the past year and that people are still dubious about the Concord/Aprisma acquisition," says Jean-Pierre Garbani, a vice president with Forrester Research. "I see good things coming from CA, but the company still has to get back at the forefront. IBM Tivoli has captured a lot of mind share lately, and it is tough to beat that."

Amid accounting scandals, management changes and acquisitions, CA has been notably quiet on the product front for the past 18 months, as new company leaders re-jiggered internal operations.

At the show the company will be sharing its product developments and company strategy. CA expects about 5,000 attendees, half that of last year's show. Industry watchers say the company must start disclosing its plans to clients to remain competitive.

For instance, vendors such as BMC Software, HP and IBM have been touting CMDB products for the past year as a means to better access, correlate and make intelligent use of configuration data collected from applications and systems by disparate management products. The technology also can show network managers the servers that applications depend upon, which can potentially speed fixes during an IT failure.

"CMDB is the hot subject du jour, and it is high time for CA to announce their strategy. ... Many clients see application-to-infrastructure mapping as a fundamental technology that will ease the pain of systems management," Garbani says.

The expected upgrades reflect CA's awareness of a shift in IT buying practices from purchasing tools to implementing integrated product suites, industry watchers say. For instance, CA is incorporating its CMDB technology across relevant products — rather than selling it as a stand-alone application — which could help customers better collect, share and manage data from multiple CA and third-party sources, says Rich Ptak, principal analyst with Ptak, Noel & Associates.

"CA realizes it needs to frame its products and message to customers in terms of IT services," he says. "It's not about how many tools they have to solve disparate IT problems. Now vendors like CA need to make the case for how their technology will solve business problems."

CEO John Swainson, who joined CA earlier this year, has said the company would focus its development efforts on areas such as management and security that were targeted as markets with high growth potential. Last month, CA reported that its Unicenter line continues to be its strongest, contributing $303 million to the company's second-quarter fiscal year 2006 billings.

Can CA catch up?

Computer Associates wants to shake off its recent past and rekindle its customer relationships. Even with noted strengths, the company will encounter roadblocks.

Challenge	Strategy
CA will face resistance and scrutiny from customers familiar with its former reputation as one of poor customer service.	Company executives, including CEO John Swainson, have been giving customers face time to hear their gripes, but CA admits only time and proven execution on product promises can revamp the company's image.
CA is known for buying its way into technology markets without clear product plans, but changes in IT buying will require the company to quickly integrate acquired technology and open up tools for use in third-party systems.	CA is expected to announce new identity and access management products this week that use technology acquired with Netegrity in late 2004, and has detailed at customer events plans for future integration among management tools from its Unicenter and acquired Concord eHealth and Aprisma Spectrum product suites.
CA must gain ground on competitors such as BMC Software, HP and IBM, which have been using the past year to tout IT services management, while CA has been busy with internal restructuring.	CA is expected to unveil its own configuration management database (CMDB) technology at CA World 2005, which is the basis for most IT service management offerings among competitors.

CA already has a strong foothold in identity and access management — in August IDC named the company as the market leader, with 20% share of the $450 million market. Industry watchers speculated at the time of the Netegrity acquisition that the purchase could increase CA's market share. IDC predicts the market for identity and access management products will grow to nearly $4 billion by 2009.

"CA knows that their customers, IT organizations, need to provide services such as identity and access management to help their internal customers make the maximum use of IT applications and services," Ptak says.

It remains unclear if customers are keeping the faith in CA.

CA posted income of $41 million for the second quarter of fiscal year 2006, up from a $98 million loss in last year's second quarter. But new business bookings fell 11% during the quarter, to $665 million. CA called the drop-off an anticipated effect of its decision to decrease early customer service contract renewals. The company has reworked its sales staff compensation this year to reward new business sales more than renewals.

Longtime customer Ben Ettlinger, lead data administrator with the New York Power Authority in White Plains and president of the New York Enterprise Modeling User Group, worried initially when he heard CA was lopping off development for certain products.

"I was very concerned when I heard the company would be focusing on Unicenter and eTrust, basically management and security, going forward," he says. "But my reps have since assured me that there is a strong commitment to the data modeling tool."

Ettlinger has been using CA's AllFusion ERwin Data Modeler software for 10 years to help him more efficiently store data, enforce business rules and reduce redundancy of data models. He says CA is preparing the first major revision of the software he's seen in years.

"I'm confident they are back on stable ground, and I still work with the same people in product development, which really makes me feel better," he says.

On the other hand, Kim Jahnz, lead WAN data network engineer at Aurora Health Care in Milwaukee, views CA with "guarded optimism" since becoming a customer by default earlier this year when CA acquired Concord Communications. She also still works with the same product teams, which "made us feel better," she says. But Jahnz is hoping CA will continue to focus on the core network management and performance reporting competencies for which she originally purchased the Aprisma and Concord products.

"Our products haven't been impacted yet, and it seems right now they are saying the right things about development going forward," she says.

Jahnz has already done the work to integrate Aprisma and Concord software in her IT shop. She says she recently learned that CA may be discontinuing certain products with plans to replace the functionality and product capabilities with a larger integrated management suite that incorporates CA's Unicenter, Aprisma's Spectrum and Concord's eHealth in the next year or so.

"CA reassured me that it did not buy the Concord and Aprisma technology to gut it and move on, but I have to basically wait and see," she says. "I am most curious about the licensing that may change when they do get the integration done. I already had maintenance and support contracts for the two products; now will I need three? It's not clear."

Stacy Cowley of the IDG News Service contributed to this story.

Niagara

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Rising power demands have pushed the industry to move from cranking up clock speed to improving system performance. Chipmakers are putting multiple cores on a single piece of silicon to enable more work to be done by less-power-hungry processors.

IBM has long had a dual-core Power processor and introduced a quad-core Power5+ last month. HP rolled out its dual-core PA-RISC chip last year. Intel and AMD both introduced dual-core x86 chips in the last few months.

Sun made its first move into the multicore arena last year, when it introduced systems based on UltraSPARC IV, a dual-core, dual-threaded processor. With UltraSPARC T1, Sun is taking a giant step forward in enhancing computing throughput, analysts say. The architecture, which is a departure from previous SPARC designs, is aimed at high-transaction Web workloads where multiple tasks need to be handled concurrently.

With typical processors, when there is a cache miss or stall, the pipeline has to wait, but with the multithreaded design the processor can perform more efficiently, says Jeff O'Neal, director of engineering in Sun's scalable systems group.

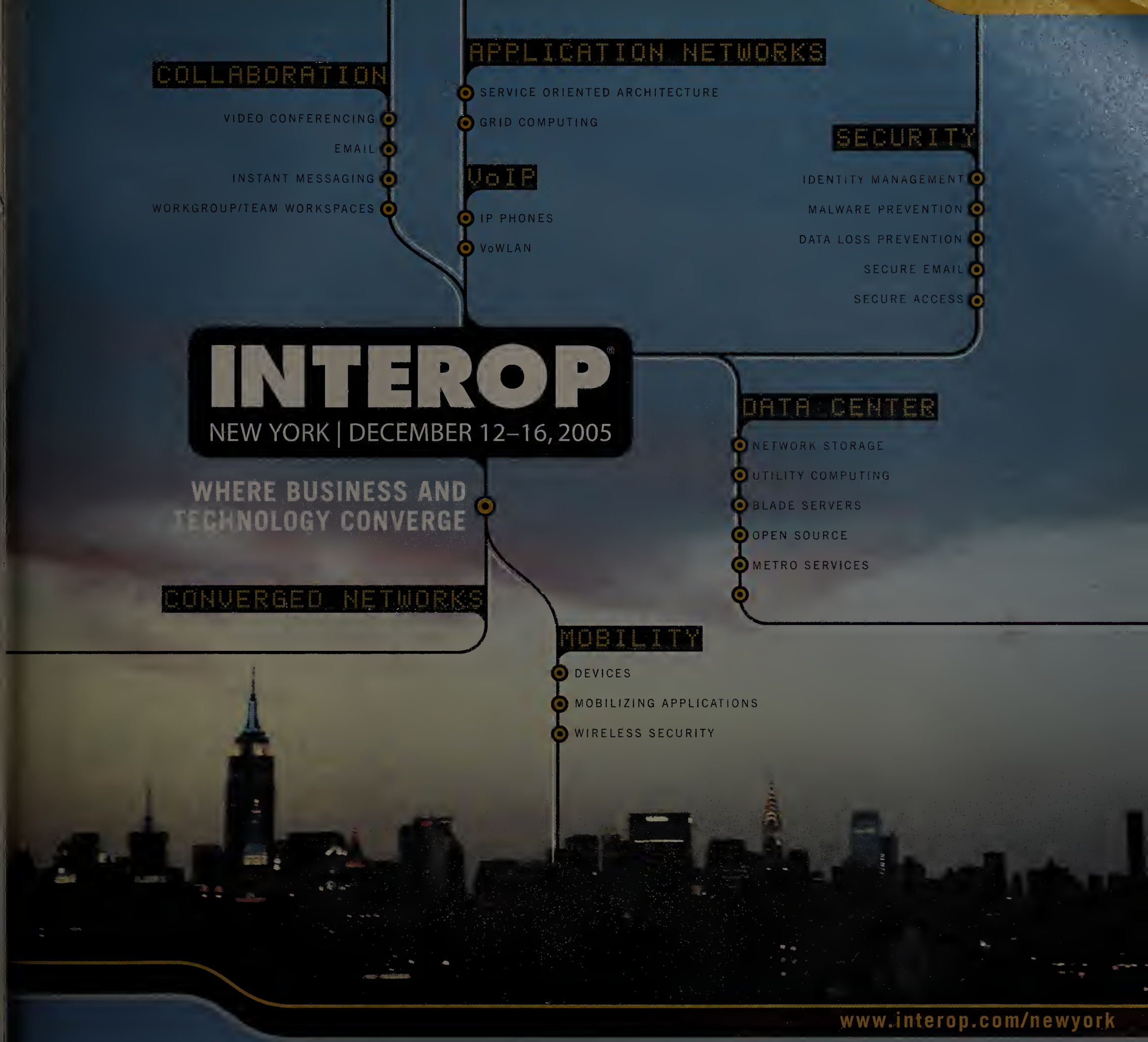
"Each core is managing four threads. So if one thread stalls and has to go to memory, then you have three of the threads continuing to share the pipeline," he says. "The idea is to keep the pipeline in that core busy all the time. It's a fundamental shift in thinking."

With UltraSPARC T1, the processor pipeline is active about 85% of the time, compared to 15% to 20% for an average chip, O'Neal says. In addition, Sun claims that end users beta testing the systems have been able to reduce their hardware requirements by 60%, while doubling performance.

W. L. Gore & Associates, best known for its Gore-tex fabric, runs UltraSPARC IV-based systems today, but is keeping a close eye on Niagara. Richard Sun, network systems engineer at W. L. Gore in Newark, Del., says he is definitely interested in the technology, but will be watching how software vendors take advantage of the new architecture.

"Assuming software vendors keep up and can truly utilize this architecture, it'll definitely be a good step in resource consolidation and centralization," he says. "The problem we've found in going to dual-core boxes is that some software doesn't appear to utilize this well." ■

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Wireless products gravitate to mesh

BY JOHN COX

Cisco and a group of other vendors are releasing mesh network products based on the 802.11 wireless LAN standard.

The products are aimed mainly at creating outdoor wireless networks, such as for municipalities, or as extensions to enterprise WLANs. In a mesh, wireless devices connect to a nearby node, which passes the packets to one or more companion nodes.

Cisco is expected to announce this week its two-radio Aironet 1500 Outdoor Mesh Access Point. Users will connect via 802.11g/b to the 1500, which will then use a separate 802.11a radio to connect with neighboring nodes. The product is based on work done by Airespace, a company Cisco acquired earlier this year.

But Cisco is late to the market. Nortel introduced mesh products in 2004, the same year Motorola acquired an early mesh vendor. BelAir, Strix and Tropos began selling products even earlier.

The 1500 is priced at $4,000. Cisco's Alan Cohen says rivals have single-radio nodes that are less expensive. But Cisco's two-radio product pricing is comparable to similar products, he says.

Last week, D-Link announced plans to deliver early in 2006 its own brand of outdoor WLAN mesh products, initially with one radio that can support 802.11g and 802.11a traffic via a dual-mode radio chipset from Atheros. The target price is $4,000.

Tropos this week is unveiling software and hardware for managing and optimizing its radios. Tropos Insight is a server-based application that pulls data from Tropos MetroMesh nodes, analyzes it and displays the results in about 40 graphical reports. The reports show active and inactive links, two-way throughput over each link and packet loss. It also calculates the likelihood of a packet successfully traveling a link the first time.

A second new tool is Tropos Drive, an appliance used to test a Tropos network from the viewpoint of end users. ■

Lotus

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Those numbers are 9 and 10, as in planned versions of Notes/Domino that will be released after Version 8, which IBM/Lotus began to detail in the fall with its new Hannover client.

Rhodin plans the first public demonstration of Hannover and the introduction of Domino 8, Hannover's back-end companion, at Lotusphere.

"Hopefully the attendees walk away saying 'we got it,'" he says.

"Got it" in terms of Notes/Domino as the focal point for collaboration and the Java-based Workplace environment as a complementary technology that helps deliver dynamically provisioned, server managed corporate desktops tailored to a worker's role in a company.

Clearing the air

Users didn't "get it" three years ago, and experts say neither did IBM, when then-General Manager Al Zollar introduced the Workplace strategy, a set of collaboration components running on WebSphere. It was a bomb that users believed had just blown Notes off the road map. Those same users were a bit less skeptical last year, when then-General Manager Ambuj Goyal said there would be no forced migrations.

Now Rhodin is tasked with shoring up the message that Notes/Domino is the core collaboration tool delivered within the Workplace framework, whose server-based architecture promises to reduce the cost of desktop maintenance and ease software upgrades.

"A lot of this is clarifying the message," says Rhodin, who has shunned the corner office at Lotus' Cambridge headquarters so he can stay in his office in Westford, Mass., close to the 800 software developers who work there.

If his message takes root, the next steps won't be any easier, according to experts.

"There are two major challenges that are fundamental," says Peter O'Kelly, an analyst with Burton Group. "Execution on Hannover. If they blow it, a lot of users will say that's it. The second thing they have to do is move potential users from 'we got it' to 'we need it.'"

That is a place Lotus has not been in for a few years.

"What they need is more momentum in the partner and IT community. I am starting to see that come back," says David Via, vice president of Wolcott Systems Group, a Lotus partner. Via recently participated in a road show for Notes 7, which was released in September. "People said to me they haven't done anything with Notes for five years but that they are now coming back." He says the trick is to again grow the user base, which stands at 120 million, just slightly more than a 1% increase over last year.

As evidence of user appeal, Lotus has posted double-digit revenue gains over the past three quarters, with most of the revenue coming from new licenses, converting Microsoft Exchange customers and Notes/Domino on Linux, Rhodin says.

That revenue, however, is not being pumped up by Workplace, where early adopters are showing interest but not the stellar results that Rhodin needs to merge Notes/Domino and Workplace.

"At this moment, I have to be honest, we are not satisfied with Workplace being ready as a full enterprise solution doing what we need it to do, but I am confident looking at the road map that we will be able to merge [from Notes to Workplace] and that it will all work for us," says John Rood, vice president of IT for San Francisco State University.

The school, which uses Notes 7, was put forth by IBM last year as a high-profile Workplace convert. The school plans to migrate to Workplace in the spring but will continue to run Notes in parallel until it feels comfortable with a change for its 50,000 users. Rood says features such as Domino Web Access in Notes/Domino 7 show that Notes is still innovative and vibrant.

Other users, such as Dale Sinstead, director of IS for Pioneer Petroleum in Ontario, Canada, say the rough spots in Workplace are being worked out and his enthusiasm is climbing.

"Notes and Domino is not going away, which is good because we have a huge investment in that," says Sinstead, who also has deployed to 150 users the Workplace Managed Client, a server-managed collaboration environment that works online and offline.

While the managed client has yet to match the rich feature set of Notes, it lets him extend collaboration tools to retailers, who don't have IT departments, desktop support or broadband connections.

The managed client is one of the top entries on Rhodin's to-do list for 2006, which includes evolving Workplace Services Express, a server-based bundle of basic collaboration tools.

He also plans to incorporate electronic forms-based business process-management software, which was part of IBM's acquisition of PureEdge, and he plans to push Notes/Domino in developing markets, such as Russia, China and India.

Other efforts, he says, include fighting off Microsoft, which is rallying its collaboration strategy around Office, SharePoint, Live Communications Server and Exchange. Microsoft CEO Steve Ballmer added fuel in July when he said Lotus' customer base was just waiting for Microsoft to move them off Notes.

"When their CEO declares the death of my product, that is throwing down the gauntlet," Rhodin says. Part of the attack includes a long-awaited update to the IBM/Lotus Messaging and Conferencing Server, a real-time communications platform whose evolution has been stalled as Microsoft has extended into technologies such as VoIP.

Rhodin doesn't plan to flinch, but says he won't focus on Microsoft at the expense of new developments such as RSS, blogs and wikis that will bring emerging collaboration technologies to his own platform. ■

The Lotus difference

At its January user meeting, Lotusphere, IBM/Lotus will show off its new general manager and his plans to re-energize the Notes/Domino platform.

Challenges	Strategies
Remove any doubt from users' minds as to the future of Notes/Domino in regard to the new Java-based Workplace environment.	Lotus may unveil plans for future versions of Notes/Domino beyond Version 8, which could ship as early as the end of 2006.
Convince potential customers they need Workplace, including the Hannover client for Notes 8, and that it is stable, feature-complete and ready for prime time.	Lotusphere agenda has been loaded up with technical sessions to give users a look under the hood.
Re-establish IBM/Lotus' lead in the real-time communication/collaboration market.	New version of IBM/Lotus instant messaging and Conferencing Server (i.e. Sametime) expected to ship before the end of January.

■ **Network World**, 118 Turnpike Road, Southborough, MA 01772-9108, (508) 460-3333.

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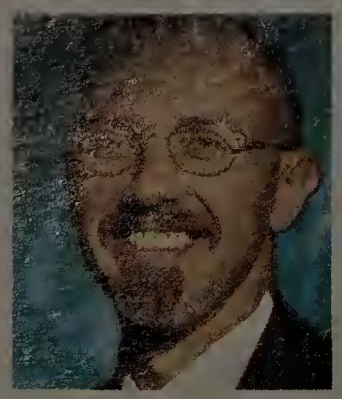


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BACKSPIN Mark Gibbs

More on Sony's rootkit

"Most people, I think, don't even know what a rootkit is, so why should they care about it?"

— Thomas Hesse, president of Sony BMG's global digital business division, interviewed on National Public Radio's "Morning Edition" on Nov. 4 (www.networkworld.com, DocFinder: 9748).

In 1951 and 1952 the U.S. Army filled balloons with the bacterium *Serratia marcescens* and burst them over San Francisco. This experiment, called Operation Sea-Spray, was to study how biological weapons might be deployed. Within the next few weeks doctors in the area noticed a drastic increase in pneumonia and urinary tract infections. Worse still, people died (see DocFinder: 9745).

These weren't the only biological weapons experiments that were done. From 1949 to 1969 (when President Richard Nixon put a stop to the U.S. biological weapons program) some 239 "open-air" tests of biological agents or simulations using chemicals were performed. And all of these tests and their consequences were kept secret until they were leaked to the press in the mid-1970s.

I relate this tale because the government's thinking was completely in line with Hesse's stated position.

The arrogance of Hesse reveals a lot about his and his company's attitude toward consumers. Perhaps most troubling is that he presumes that the ignorance of others is a reasonable basis for doing something to their property. Even worse is the fact that something could have unknown side effects and consequences.

The truth about the Sony BMG rootkit called XCP Content Management, which was provided by First 4 Internet, has slowly emerged, even while Sony and First 4 Internet continue to claim that XCP neither invades user privacy nor is a source of risk or system instability.

Sony and First 4 Internet attempted to rebut some of Mark Russinovich's findings, but Russinovich sliced and diced their comments (see DocFinder: 9746) and the particulars haven't changed. Computer Associates has classified the Sony digital rights management (DRM) system as a Trojan and spyware because it reports back to the Sony BMG mothership! (See DocFinder: 9747, and check out Gibbsblog, where I have an interview with CA's vice president of eTrust Security Management.)

It seems you are as appalled as I am. Reader Mark Bruch wrote "some teenager that gets a virus on his home computer plays with it, and the new strain gets in the wild. He didn't invent the virus, but our government, in order to show they are protecting us, breaks in armed and seizes everything in the family house and throws the book at the underage kid in court."

Bruch pointed out that if there is any justice, the Sony executives who authorized the use of this DRM system will wind up behind bars. I think everyone who was in the chain of command that led to the use of the DRM system (technicians and all) should be prosecuted.

The class-action lawsuit that I was hoping for has started: On Nov. 1 a group of California consumers filed suit, claiming that Sony BMG violated two California statutes. The first protects consumers from unfair and deceptive business practices, and the second prohibits the installation of spyware. The suit also alleges that Sony has violated the California Unfair Competition law.

Another suit was to be filed last week in New York, and Italian authorities were asked to investigate Sony's actions.

Sony BMG's insane use of DRM is just the leading edge of a potential wave of corporate technological tyranny intended to protect profits and control markets. You can bet there are feverish meetings going on at the Recording Industry Association of America and the Motion Picture Association of America to organize political pressure to minimize any judgment on Sony BMG's actions.

If Sony BMG isn't held accountable, worse assaults on consumers by not only Hollywood but any content or software publisher who pleases will quickly follow.

Your outrage to backspin@gibbs.com and see Gibbsblog (www.networkworld.com/weblogs/gibbsblog/) for the CA interview. Don't forget to vote in our poll on what should be done about Sony and its rootkit (www.networkworld.com/community/?q=node/3502).



NETBUZZ News, insights, opinions and oddities

Paul McNamara

Dial H for human

"Just . . . let . . . me . . . talk . . . to . . . a . . . human . . . being."

We've all spit those words through clenched teeth after a round of combat with some corporate behemoth's automated call center.

Paul English has done more than just spit; he's mustered up a way to help the rest of us break on through to the other side of those seemingly impenetrable communications barriers. Co-founder and CTO of travel-search site Kayak.com, English has posted on his personal Web site a cheat sheet for busting through interactive voice response (IVR) systems. A database that started with the keys to 10 company IVRs in March is now up to 108 entries and growing, as English allows for reader submissions.

Among the tips offered at http://paulenglish.com/ivr/:

- Want a Sprint/Nextel human? Press "0" fives times.
- Capital One Visa? That'll also take five zeroes, plus the fortitude to ignore verbal prompts alleging that your entries are invalid. Be strong.
- Delta Airlines? Say "agent" at the prompt. . . . Say it again at the next prompt . . . And the next. . . . One more time. Don't forget to breathe in between.

The list includes a galling litany of variations on the theme, and it's been getting a ton of traffic, English says, especially after a front-page article recently in *The Boston Globe*. It even notes those companies that do well by their customers in terms of providing human contact, including a number that offer the option of dialing "0" — only once — to hear a real voice.

English isn't opposed to automation, per se.

"IVRs are great, and we should have them everywhere, but please let me get to a human if I really need to do it," English says.

When we spoke I posed to him the obvious devil's advocate question: If companies can make more money providing crappy/cheaper automated phone service than they can doing it well with humans, who's to say they're wrong to give us less than their best? The people who run these companies aren't stupid; they're simply motivated more by the bottom line than a desire to spare us irritation.

"You say the people who run these companies aren't stupid? That's not always the case," English says. "I don't mean to be flip, but what I would look at is which companies have incredibly strong brands and loyalty — where the customers come back, they spend more, and customer acquisition is low because people bring their friends. It's companies like Southwest Airlines and Nordstrom: You call them, and they answer."

English speaks now as the aggrieved consumer, but his quaims about IVRs also come through business experience. A former vice president of technology at Intuit, he oversaw a 2,000-person call center in Tucson, Ariz.

"I automated part of the software, so when you bought QuickBooks a lot of it would be done automatically that previously had been done over the phone," English says. "When [Intuit founder] Scott Cook, my boss, found out what I had done, he was pissed. He said, 'Paul, are you kidding? People buy QuickBooks because it's very stressful to try to set up a new business. If we have an opportunity to talk to them and make them feel comfortable and ease them through it, they'll be more successful, we'll form a better relationship with them and maybe we can sell them other stuff.' Scott had me totally rip it out. . . . I remember going through that experience: I didn't completely get it."

Unless you're a corporate bean counter, it's tough to argue with English, especially when he gets on a roll.

"The thing that I hate is that a lot of IVRs are designed poorly . . . and, increasingly I'm making calls from my car phone," he says. "Please don't ask me to be punching buttons and menus for four minutes while I'm driving my car down the street. Just let me hit '0' and get to a human."

Of course, there is another option in that particular circumstance: Pull over before you make the call.

But, hey, let's not quibble. The guy's fighting the good fight here.

Suppose there's no getting around giving out the phone number after writing this kind of column: (508) 490-6471. The address is buzz@nwu.com.

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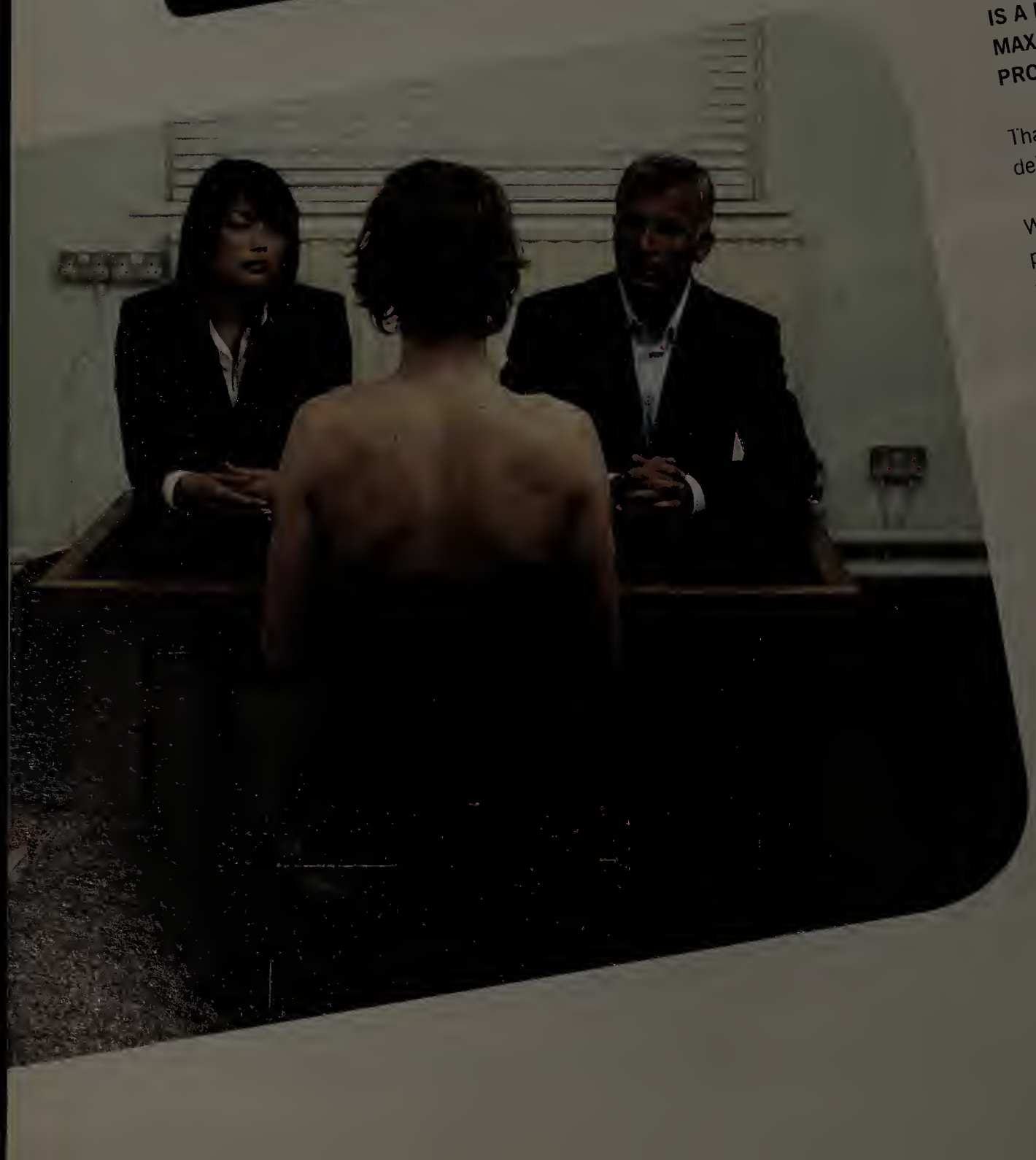
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